An Address
ON
MAN'S CRANIAL FORM,

TOGETHER WITH SOME REMARKS ON THE ATTITUDE OF THE MEDICAL PROFESSION TOWARDS ANTHROPOLOGY.

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[AFTER a few introductory remarks Professor Thomson said :]

When first I undertook the delivery of this address I was uncertain with which particular part of my subject I should deal. For this reason I was led to select a title which would afford me the opportunity of varying the details of the matter I might possibly discuss. There is no lack of interest or variety in the science which I have the honour to represent. The difficulty consists rather in the choice of such an aspect of this particular branch of knowledge as may appeal alike to those who are specialists and those whose interests are less technical, for I am anxious to lay stress upon the fact that even the busy practitioner may render immense service to science if only he will accurately record the observations which often he alone has the opportunity of making.

I have no wish to delay you with a detailed reference to the history of medicine, but I may perhaps be permitted to point out that science owes much to medicine. It was Erasmus who described theology as the mother of the sciences. This may be true as regards the philosophies, but it can hardly be considered applicable so far as the natural sciences are concerned. When we remember how closely blended in the past were the interests of the healing art with those of anatomy, physiology, botany, chemistry, and physics we recognise how much each owes the other and how much the cultured physician of the time was of necessity an authority on, and oftentimes an exponent of, these several branches of study. With the acquisition of knowledge, however, and the vast accumulation of new facts and theories, it became no longer possible for one man to attain proficiency in his calling and at the same time to maintain a position as an authority on all or even one of these kindred studies. In consequence we find that this state of things early led to specialism and so in course of time these sciences became severed from, and developed apart from, medicine. Of the more recent of the offspring of medicine we may cite bacteriology and anthropology. It is of anthropology that I wish more particularly to speak. Somewhat of a weakling, it may be regarded as the adopted child of medicine, a child possessing no very marked individuality but displaying traits of character which certainly render it attractive. Its many-sidedness is the source of its weakness and the explanation of its lack of independence. It is little wonder, then, that it should have fallen to the lot of medicine to lend a helping hand to assist it through years of adolescence. Its growth is slow rather than feeble and every decade marks a record of sure and steady progress.

It may not be amiss to consider for a moment why anthropology in its physical aspect should have fallen under the protection of medicine. Its processes and developments concern themselves with all that appertains to man, and no class is better qualified to assist in the solution of its problems than the profession whose lot in life, perhaps, brings it most intimately in contact with man in his different conditions and environments. A skilled observer by education and training, the medical man in the performance of his duties is brought into relation with aspects of human nature denied to most others. A pioneer as much as the missionary, he is ever in the front rank, seeking to soften by the exercise of his art the harsher visitations of nature. His work and eagerness for information often lead him into regions hitherto unexplored, whilst his skill in the relief of suffering usually enables him to win the confidence of those who have profited by his assistance. Thus he has opportunities of studying man which the zoologist or the lay explorer can never rival. But although I have laid stress on that aspect of his work which leads him far afield, along untrodden paths, I would have you bear in mind that even in the more familiar walks of life there is much for him to do. He is the constant witness of the ever varying influences of nature operative from birth through adolescence to old age and death. The examination of his patients provides him with opportunities for studying their bodily characters and peculiarities in a manner unavailable to others, whilst his observations on disease, nutrition, food, soil, and climate, enable him to form an especially valuable estimate of the influence of environment on the individual and on the community. In matters of heredity, too, his experience often ranges through three and sometimes four generations. For all these reasons the medical man is especially well qualified to play an important part in the development of physical anthropology. He has done so in the past and there is every reason to hope that he may continue to do so in the future. What are wanted are more coöperation and greater unity of purpose. Whilst individual observations are always valuable some attempt should be made to combine in research. Just as nowadays the inquiries into cancer and tuberculosis are being conducted in a systematic manner so many of the problems of anthropology can only be solved by united effort. I am aware that various attempts have been made in this direction but the great mass of the profession has never been approached to share in the work. I cannot help thinking that if medical men in various parts of the world were requested to furnish such data as were wanted, by a duly elected and properly constituted central authority, much useful information would be acquired, whilst interest would be added to the professional duties of those who helped. The appointment of an international committee of experts would be the first step towards the realisation of such a scheme. Were any such plan adopted it seems to me imperative that those whose coöperation is sought should be instructed regarding the relation to the inquiry of the facts they are requested to record. In this way you are more likely to obtain satisfactory results than if you merely propound questions and expect answers.

I may, perhaps, best illustrate my meaning by taking a somewhat detailed example. It is natural that I should select a branch of the subject to which I have been devoting considerable attention lately, and whilst I would by no means presume to hint that it is of all others the most important, yet it will serve to enable me to point out lines of inquiry which might with profit be pursued by those who are actually brought in contact professionally with peoples of different nationalities and race. The subject which I propose, with your permission, to discuss is the vexed question of cranial form and the significance of the cephalic index. I know full well that the matter has engaged the attention of many more competent than I am. Yet I think that there are aspects of the question which have been overlooked, or at least insufficiently commented on, and that must be my excuse for venturing to address you on what at first sight seems to be a threadbare topic.

For purposes of convenience, it may be well to group the influences at work in the determination of cranial form under two heads: (1) those operative from within; and (2) those operative from without. The former includes such factors as volume of brain, growth of sutures, and ossification of bones, compensation as to balance of head, heredity, and breeding. The latter embraces muscular influence dependent on jaw development more or less intimately related to the size of the teeth and consequently associated with diet. In this way environment plays a part in the modification of man's cranial form in the same manner as it is productive of the variety of shapes met with in other types.

I propose primarily to deal with the mechanical influences enumerated under (1), because I shall have most to say on this subject and because, if novelty there be in any of my observations, it is mainly concerned with this aspect of the question. The time at my disposal is so short that I can only touch very briefly on some of the points which require consideration.

In regard to the teeth it is obvious that large teeth must require large jaws. Abundant proof has been furnished by Flower and others that the races of mankind display remarkable variety as regard the size of their teeth. Large teeth are characteristic of the lower races, whilst small teeth are the attribute of the more highly civilised types. Apart,

however, from the size of the teeth, testimony is not lacking to prove that a reduction in their number is also taking place. The tendency for the wisdom molar to disappear is much more common in the higher than in the lower races and when we remember that examples are not wanting of jaws in which a fourth molar has been present on each side there appears ample justification for the assumption that a reduction in the number of molars has already taken place and is still in progress. But it is not only the wisdom teeth which occasionally fail to appear, the lateral incisors also in some cases abort or are never developed. If, then, the number as well as the size of the teeth is undergoing a reduction, it cannot but be doubted that this must be accompanied by a diminution in the size of the jaws. Other reasons have been assigned to explain the development of the mandible, such as its use for prehensile purposes, its growth in association with the tongue, and the changes induced by the altered conditions of the circulation referred to by Fauvelle,[1] but none of these need seriously affect the issue, since none can compare in potency with the influence exercised by the teeth. This is perhaps best illustrated in the case of the apes during the period of the eruption of the permanent dentition, when, as Hüter[2] has pointed out, a great increase must necessarily take place in the molar segment of the body of the mandible to provide accommodation for those teeth which are not represented in the milk dentition. The changes which are so characteristic of the apes one would naturally expect to see displayed in the case of man, but here, unfortunately, the evidence is somewhat conflicting. Pruner Bey held that at birth the negro child displayed no prognathism, whilst Hrdlicka asserts that the face of coloured children is generally more prognathic than that of white. Here, then, is an instance of the necessity for further information. Although we accept it as correct that large teeth necessarily require large jaws it by no means follows that the jaws are more projecting. A moment's consideration will enable it to be realised that, given an equal alveolar length, two jaws may display quite different appearances: in one the curve may be of the parabolic type with consequent projection, in the other it may assume an elliptical form with less forward thrust. In one the jaw will be associated with a narrow and in the other with a broad face.

But whilst we have seen that the jaws are liable to many varieties of size and shape due to alterations in the number and magnitude of the teeth we must also consider what effects these changes will have on the development of the muscles connected with the mandible.

The extent and development of these muscles lead to many variations in the form and extent of the temporal fossæ, to mention only one instance of muscular attachment; and everyone who has examined a series of mammalian or avian skulls must have been struck by the remarkable modifications in the cranial shape induced by a greater or less development of the muscles of the jaws or beak. As Dr. Arthur Keith, to whom I am indebted in this inquiry for much valuable assistance, has pointed out, the expansion of the temporal area over the side of the skull in the anthropoids is correlated with the developing jaw and the eruption of the permanent teeth. In this group of animals the changes induced are very manifest because the results are not masked by undue expansion of the cranial cavity. In the anthropoids the average cubic capacity of the adult exceeds that of the young animal by from 50 to 150 cubic centimetres, whilst in man the difference between the cubic capacity of infants a few days old and that of children 15 years of age amounts to 978 cubic centimetres (Topinard). As will be seen hereafter this expansion reacts on the influence of the temporal muscles.

Whilst these facts have been widely recognised and their influence has been more or less directly referred to, so far as I am aware no attempt has been made to estimate their value as determining factors in the production of cranial form. Nor need we be surprised at this since the methods of mensuration of the lower jaw now apparently universally adopted by craniometrists is one altogether useless to enable us to analyse the mechanism of the jaw and its muscles. The only paper to my knowledge dealing with the lever-like action of the jaw is one by J. Gorham.[3] In this, however, the author was concerned with the arrangement and form of the teeth as set in the jaw and the forces necessary to raise them. In the present instance we are concerned not so much with the forces exercised on the jaw but with their secondary effects on the parts from which they arise.

The width between the condyles of the jaw is necessarily correlated with the width of the cranial base. The condylo-symphysial length, which is the measure of the distance between two verticals passing in front of the symphysis and behind the condyles whilst the jaw rests by its body on a horizontal plane, will indicate pretty precisely the long arm of the lever. By comparing this length with the intercondylic width (= 100) we get what for convenience may be termed the mandibular index:—

$$\frac{\text{Condylo-symphysial length} \times 100}{\text{Intercondylic width.}} = \text{mandibular index.}$$

I find that this index ranges from 70 to 100; when the index is high it means that the jaw is long proportionately to its width, whilst when the index is low the jaw is short relatively to its width. Grouping together my results it appears that 13 brachycephalic skulls yield an average mandibular index of 84·8, 11 mesaticephalic skulls an average of 88·8, whilst 20 dolichocephalic skulls yield a mandibular index of 90·6. There is thus distinct proof of a correlation between jaw length and head length.

Discarding for the time being the influence of the other muscles closing the jaw and confining our attention to the temporals only, it is obvious that a long jaw will require a more powerful muscle than a short jaw to produce the same result at the "bite," provided the force is applied at the same distance from the fulcrum. Were such the case the problem would be fairly easy, but unfortunately nature provides compensation by varying the position of the point of application of the force. Assuming that the tip of the coronoid process represents the point of maximum intensity of the power exercised by the temporal muscle, we find that the distance of that point from the axis of rotation of the temporo-maxillary articulation varies considerably in individual jaws. The length of the short arm of the lever may be somewhat roughly estimated by measuring the distance between the posterior edges of the condyle and the tip of the coronoid process. Reducing this to its proportion to the length of the mandible (condylo-symphysial length) we can obtain an index thus:—

$$\frac{\text{Condylo-coronoid width} \times 100}{\text{Condylo-symphysial length}} = \text{coronoid index.}$$

This enables us to determine the proportion of the short arm of the lever to the length of the long arm. I find from comparison of the specimens which I have examined that this index ranges from 43 to 31—that is to say, assuming that the force is applied at right angles to the lever and also that the coronoid process always lies in the same horizontal plane as the lever, the jaw with a high coronoid index will act, provided that the same force is applied, with proportionately greater advantage than one with a low coronoid index; for in the case of the jaw with a high index the force is applied at a point further removed from the fulcrum than in a mandible with a low index. In estimating the amount of force necessary to effect the same result in the masticatory apparatus of two skulls, we have two factors to consider: (1) the length of the lever or jaw as a whole, and (2) the disposition of the force on that lever. The subject thus becomes much more complicated than before, for an examination of a considerable number of specimens proves that these two factors do not always interact upon each other in the same way. Thus we may have a long mandible which will obviously require the exercise of greater muscular force to discharge its functions, were it not that this is compensated for by the fact that that force is applied at a point more remote from the fulcrum. On the other hand, a jaw of similar proportions, owing to the fact that the coronoid process lies closer to the condyle, will require a much greater muscular effort to produce the same result.

There seems to be a correlation between the coronoid index and the cephalic index, for I find that the higher coronoid index is more usually associated with dolichocephaly whilst the lower coronoid indices are met with in skulls of the brachycephalic type. The number of observations, however, are too few to draw any conclusions from, and further data are required before we can arrive at any definite result. Since, then, it appears that we are unable to harmonise the counteracting influences of the two factors at work it occurred to me that perhaps the best way to attempt

[1] Bulletin de la Société d'Anthropologie de Paris, 1888, p. 463.
[2] Virchow's Archiv, Band xxix., p. 21.
[3] Medical Times and Gazette, 1875, vol. i., p. 28.

FIG. 1A.

FIG. 2A.

FIG. 3A.

FIG. 1B.

FIG. 2B.

FIG. 3B.

FIG. 1C.

FIG. 2C.

FIG. 3C.

The figures show a skull, the vault of which has been replaced by an elastic bladder. The top line (Fig. 1A, Fig. 2A, and Fig. 3A) = norma frontalis; the middle line (Fig. 1B, Fig. 2B, and Fig. 3B) = norma lateralis; and the bottom line (Fig. 1C, Fig. 2C, and Fig. 3C) = norma verticalis. In each series the appearance of the skull is shown when the bladder is (A) slightly, (B) moderately, and (C) considerably extended.

the solution of the question would be to determine experimentally the amount of force necessary to overcome the same amount of resistance in jaws from different skulls the measures of which (the skulls) were known. As the reader will understand, my object in thus studying the mandible has been to attempt to estimate in each particular skull the amount of force exercised by the temporal muscle to produce a like result. Were we successful in doing this we should be able to form some idea of the relative developments of the temporal muscles and thus see whether, as I have already hinted, this development of the muscles has any correlation with the cephalic index and if that be so whether we are justified in regarding it as one of the predisposing causes in cranial formation. For this purpose I devised an apparatus, details of which are published elsewhere, which enabled me to estimate with fair accuracy the amount of force necessary to overcome a similar resistance applied over the incisor teeth of the jaws which I experimented with. Thus I found that the weights necessary to act as a counterpoise to the jaw loaded with 100 grammes placed over the incisor teeth or at the "bite" ranged from 320 to 448 grammes. In other words, assuming that we closed the jaws with a force equal to 100 grammes at the incisor teeth we would require to exercise a muscular effort equal to from 320 to 448 grammes, and if at the same time we neglect the influence exerted by the other elevators of the jaw we may regard this as some index of the development of the temporal muscles. Such being admitted it must also be obvious that a corresponding force will be exerted over the area from which the muscle arises. Granting that this is so we would naturally expect a correlation between the weights recorded and the cranial form, assuming, of course, that we are prepared to admit that the shape of the head can be affected by any such influences.

Happily for my argument we find this view abundantly supported, for whilst the brachycephalic skulls average a weight of 370 grammes to counterpoise their jaws loaded to the extent of 100 grammes, we find that the dolichocephalic skulls require a weight of 390 grammes to produce a like result under similar conditions—that is to say, a difference of over 5 per cent. in the amount of force necessary to produce the same effect in the two types. Now when we consider the large amount of force which a healthy man can exert by closing his jaws it will be at once recognised that the amount of effort necessary to produce this result will vary very greatly; in other words, that the dolichocephals are as a rule furnished with more powerful temporal muscles than the brachycephals, and further, since we have already seen that the mandible of the long-headed races is more projecting than that of the round-heads, we are justified in assuming that this increased muscularity is necessary to overcome the mechanical disadvantage at which so long a lever acts. I will not dwell on this aspect of the question further than to remind you that the sides of the cranial vault to which the temporal muscles are attached are the parts of the cranium which are most intersected by sutures of a complicated arrangement. We can therefore readily understand how this, the region of the pterion, is less able to withstand long-continued pressure, or, as perhaps it would be better to describe it, that it is more susceptible to the influence of prolonged stress.

Passing now to the consideration of the causes operative from within I need say nothing of the influence of sutural growth except to refer to the recent work of Papillault,[4] who has shown that the occurrence of the metopic suture is more common among races with large cranial capacity and is due to a superiority in the bulk and relative weight of the cerebrum. What I should particularly like to lay stress upon are the observations of Boas[5] in regard to the cephalic index. That distinguished anthropologist has succeeded in establishing certain correlations which are most valuable. Thus he shows that the diameters of the skull are primarily determined by its capacity, the height appears to be most closely associated with the capacity, the length least so. On the other hand, the correlation between the breadth of the face and the horizontal diameters of the head shows the two transversal diameters to be very closely correlated, while the length of the head is more closely correlated with the height of the face. Boas further states that when capacity is introduced into our consideration of the question a compensatory growth is found to exist between the breadth of the head on the one hand and the height and length on the other. "The relation between capacity and head diameters is found to be of fundamental importance and among these the relation between the transverse diameter and the capacity is most significant."

Failing the time to refer to other considerations of interest in this connexion, I must content myself with drawing your attention to the confirmation which these views receive from those classes of pathological cases in which there is either a diminution or an excess in the volume of the cranial contents. I refer to microcephaly and megacephaly of a hydrocephalic type.

The ape-like characters of the former have frequently been referred to, whilst the "old-fashioned" or intellectual appearance of sufferers at an early stage of the latter disease has often been remarked upon. For our purpose it is important to note that these appearances are entirely dependent on cranial capacity. The microcephal is usually a pronounced dolichocephal of a simian type, while the chronic hydrocephal usually displays the appearance of exaggerated brachycephaly. Perhaps one of the most interesting points in connexion with both these classes of cases is that while the cranial vault—i.e., that part of the calvaria developed in membrane—displays great variation in form and size, the cranial base—i.e., that part of the skull ossified in cartilage—shows little evidence, as a rule, of much alteration of its relative proportions. It seems that we have thus an explanation of how, by increase in the volume of its contents, the cranial capacity can not only be enlarged, but the shape of the cranial envelope modified. One might have expected to have obtained confirmatory evidence of these views by noting the changes which occur in the form of the head attendant on its increase in capacity during growth. The evidence adduced, however, is very conflicting; whereas some observers maintain that as the child grows his head increases to a proportionately greater extent in the transverse diameters, others assert that increased relative length is the rule. Both of these observers probably are right, and the discrepancy between them is due to the fact that their observations have been made on different types—types in which the various factors interact differently so as to produce different results. Here we have an admirable instance of the kind of information much desired and surely readily obtainable if only the want be proclaimed. It is highly probable that a negro child's head is much rounder than it is in the adult, in this respect resembling the anthropoids, whilst the head of a white infant is probably more elongated than it is in after life, the changes being due entirely to differences in cranial capacity and the influence of the masticatory apparatus. Until such evidence is forthcoming, however, it would be rash to venture upon any conclusions.

Considering the membranous nature of the cranial vault during growth and development, as contrasted with the cartilaginous base, it stands to reason that the vault will be reacted on more readily than the base; and given a cavity of oval or elliptical form with elastic walls the more its contents are increased the greater will be its tendency to assume a spherical shape.

That man is descended from a pronounced dolichocephalic type with a cranial capacity lower than that of any existing race is generally conceded; it follows that the modifications in shape consequent on an increase in the volume of the brain will tend towards sphericity; in other words, the cranium will become rounder. All the evidence seems to point this way, and although there may be some who doubt the validity of such an argument they will, I trust, be convinced with the proof which I now propose to supply.

It occurred to me that it might be possible experimentally to test the influence on the form of the skull of these mechanical agencies which we have just discussed. This I have done in the models which I show you (see diagrams). In these the vault and sides of the cranium have been cut away, leaving only the base. To this has been cemented a rubber bladder which can be inflated through a tube passing through the foramen magnum. To the sides of this bladder have been cemented a number of silken cords arranged as are the fibres of the temporal muscles. By affixing weights to these or by putting a strain on them, we can exert an influence over the area of the bladder to which they are attached comparable to that which the temporal muscles exercise on the cranial walls. We are thus provided with a means of testing the charges induced by increased capacity, for by

[4] Mémoires de la Société d'Anthropologie de Paris, tome ii., 3. série, Ie fasc.

[5] The Cephalic Index, American Anthropologist, new series, vol. i., 1899, p. 448.

altering the degree of distension of the bladder we can simulate pretty closely the natural process. We can further test the influence exerted by the temporals by putting a strain on the fibres of the imitation muscles in the model. Let me now proceed to demonstrate what takes place in these models under different conditions. I have one model here in which the temporal muscles are not represented. On this we can test the influence of increasing distension on the cranial envelope. With just such an amount of air within the bladder as is necessary to distend its walls slightly we obtain a form which is distinctly reminiscent of the anthropoid apes. The internal pressure is not yet sufficient to distend the fore part of the cavity and, in consequence, the brow ridges remain prominent and outstanding, whilst the shape assumed by the vault is that of pronounced dolichocephaly. On increasing the internal pressure by the injection of more air the frontal region becomes gradually inflated, with consequent gradual disappearance of the prominent supra-orbital arches; in fact, as the internal tension is increased the envelope alters so as to display successively the contours associated with such types as that of the pithecanthropus and the skulls of the Neanderthaloid and Australoid races. As yet, however, the vault preserves its elongated and narrow form, thus exhibiting in almost every detail the characteristics of the skulls of what may be termed the primitive races of man. On proceeding still further with the inflation of the balloon, the expansion, whilst general throughout, particularly affects the height and width of the vault, passing through all the stages of decreasing dolichocephaly through mesaticephaly to pronounced brachycephaly. The consequent elevation of the frontal region at length causes the entire obliteration of the projecting brows and the appearance presented by the model displays all the features of a skull of elevated type. It may be argued that the foregoing experiment proves nothing, yet, whilst admitting that the means employed are only a crude imitation of nature's processes, it must be conceded that the model displays in a very striking manner the appearances exhibited by skulls of different types.

The cause of the production of the supra-orbital ridges and their subsequent disappearance by the further distension of the cranial cavity is most instructive. We see now the necessity for the massing of the bone in this region in skulls of small cranial capacity. The cranio-facial axis is as essential to the face as it is to the calvaria. A reduction in the size of the latter does not necessarily reduce the length of that base from which the skeleton of the face depends. As a consequence, however, of the reduction of the size of the cranial cavity the bone over the orbital ridges must be thickened in order to afford a base of resistance through the superior maxilla against the bite of the mandible. When, however, the distension of the cranial cavity leads to an expansion of that space over the orbits, and a consequent elevation of the frontal region, the necessity for this heaping up of the bone over the brows disappears, since the orbital and ascending plates of the frontal bone are now disposed at such an angle as greatly to enhance the strength of this part of the skull without entailing so much bony deposit. The experiment further demonstrates the gradual transition from the dolichocephalic to the brachycephalic form which accompanies increased cranial expansion. It seems absurd after this exhibition of the influence of internal pressure to discuss the independent origin of the dolichocephalic and brachycephalic types. Everything points to the dolichocephalic as being the older stock and though it may have taken many thousands of years to have evolved the rounder headed races we have only to consider the evidence adduced in connexion with hydrocephaly and the facts demonstrated in the above experiment to realise how readily this transformation may occur and how intimately it is associated with increased internal capacity. Whilst undoubtedly the influence of capacity is of paramount importance in man, we can study in the models the modifying influence of the temporal muscles by exercising a certain amount of traction on the silken fibres which represent these structures. This is best done by the application of weights and, as the results show, considerable alterations are effected thereby. As will be seen the effect produced varies with the degree of distension of the capsule and the amount of weight employed, and whilst the results are not so striking as might be expected still they are sufficient to prove that they must be taken into account in considering these varieties and subtilties of cranial form to which of late Sergi has directed special attention. Further, as will be seen, the result differs accordingly as different parts of the muscles contract (as represented by the tension exercised on the silken cords). Now, an examination of skulls of different types clearly demonstrates the fact that the expansion of the area of attachment of the temporal muscles does not always take place in the same direction. Some tend to rise on the side of the cranium, whilst others spread further backwards. In this connexion there seems reason to believe that the posterior fibres of the muscle are better developed in those who use their jaws in a grinding fashion and probably this is correlated with the wear of the teeth so characteristic of certain races. No doubt the tough and gritty nature of their diet may to some extent explain the attrition of the teeth in certain races, but it would also be a direct cause of the more powerful grinding movements necessary to reduce the food to pulp, thereby increasing that part of the muscle more particularly concerned in the grinding movement. Be that as it may, the fact remains that when in the model the capsule has been distended so as to assume an ovoid form an increased traction of these posterior fibres at once converts the shape into that of ellipsoid.

The time at my disposal has prevented me from touching on many subsidiary details of no little importance, nor have I been able in this general survey to refer, in even a general way, to the researches of others. My endeavour has been rather to prove that the shape of man's head in his higher developments is the outcome of those physical and intellectual environments which have led, on the one hand, to the reduction in size of his jaws and, on the other, to the increased volume of his brain. These attributes are perpetuated by the influence of heredity and modified by cross-breeding and the laws of natural and sexual selection, but there is no constancy about them, since they are primarily dependent on the physical forces which we have just discussed. We have, I trust, been able to trace the gradual ascent in the form of man's cranium from one group to the other, thus disposing of the necessity of explaining the existence of dolichocephalic and brachycephalic types as due to independent origins. Furthermore, I have endeavoured to show how the confirmation of this solution of the problems of man's varied cranial form can be assisted by the careful and accurate records of those in practice who have opportunities of noting the changes in form of the jaw and in shape of the head during the periods of growth from infancy to maturity.

In conclusion, let me say that as regards the cephalic index I am in entire agreement with Professor Boas, who considers that whilst that index "is a convenient practical expression of the form of the head, it does not express any important anatomical relation." My own observations entirely confirm his view that the relation between capacity and head diameters is of fundamental importance and that among these the relation between the transverse diameter and the capacity is the most significant.

AN ANALYSIS OF A FURTHER SERIES OF 250 CONSECUTIVE OPERATIONS FOR PRIMARY CATARACT PERFORMED IN THE GOVERNMENT OPHTHALMIC HOSPITAL, MADRAS.[1]

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THESE 250 cases form a consecutive series of operations for the extraction of cataract performed in the Government Ophthalmic Hospital, Madras, in the period from Nov. 30th, 1901, to Feb. 1st, 1902. As in the previous series secondary cataracts and those complicated with glaucoma have been excluded. Black cataracts were subjected to a more rigid examination than before and a closer censorship was exercised over the admission of cases in which there were any signs of catarrh of the conjunctiva.

The preliminary remarks made in my previous paper are equally applicable to this one. MacKeown's method was

[1] Vide THE LANCET, Nov. 8th, 1902, p. 1252

adopted throughout and I can only say of it that the more I use it the better I like it; it has all the advantages I claimed for it in my previous paper and deserves a wider recognition than it has yet been accorded. The number of cases operated upon with iridectomy was 246, the number in which iridectomy had been previously performed was 3, and 1 was operated on without iridectomy.[2] The number of cases in which irrigation of the anterior chamber was employed was 249 and in 1 case the anterior chamber was not irrigated. The number of right eyes operated on was 130 and the number of left eyes was 120. The number of cases in which a hypodermic injection of morphine was given was 53, or 21·2 per cent.

The nature of the cataract was as follows:—Corticonuclear, 178 cases, or 71·2 per cent.; nuclear, 42, or 16·8 per cent.; Morgagnian, 26, or 10·4 per cent.; posterior polar, 2, or 0·8 per cent.; soft, 1, or 0·4 per cent.; and capsular, 1, or 0·4 per cent.

Complications met with before operation.—(1) Congestion of the conjunctiva and catarrh, 172 cases, or 68·8 per cent.; (2) granular ophthalmia, 1, or 0·4 per cent.; (3) pterygium, 36, or 14·4 per cent.; (4) opacity of cornea, 8, or 3·2 per cent.; (5) anterior synechia, 1, or 0·4 per cent.; (6) posterior synechia, 2, or 0·8 per cent.; (7) rigidity of iris, leading to slow or irregular dilatation of the pupil under a mydriatic (no adhesions apparent), 7, or 2·8 per cent.; (8) increase of tension, 18, or 7·2 per cent.; (9) diminution of tension, 6, or 2·4 per cent.; (10) dislocation of lens, 1, or 0·4 per cent.; (11) tremulous lens (due to lax zonule), 1, or 0·4 per cent.; (12) presence of a coloboma from an iridectomy previously performed, 3, or 1·2 per cent.; (13) lacrymal obstruction, 2, or 0·8 per cent.; and (14) albuminuria, 1, or 0·4 per cent.

1. Of the 172 cases of conjunctival congestion and catarrh many were very slight in degree; 100 of them were treated with silver nitrate before operation for periods varying from three to 31 days. All did well except 2: of these 1 had been under treatment of the lids for 31 days, yet developed suppurative iritis after operation, and the other did likewise after eight days' preliminary treatment.

2. The case of granular ophthalmia received ten days' preliminary treatment and made an uninterrupted recovery.

3. In 2 of the 36 cases of pterygium transplantation was performed as a preliminary measure; in the remaining 34 cases the pterygium was avoided during the section, and in one of these the growth inflamed and delayed convalescence, the rest doing well.

4. The opacities in all the 8 cases were peripheral and did not seriously interfere with the results.

5. In the case of anterior synechia iritis threatened after the operation, but subsided under leeching, &c.; the vision on discharge was M.B.E. (miniature bull's eyes) at 1·75 metres.

6. Both the cases complicated with posterior synechia did well and the vision on discharge was respectively M.B.E. at 6 metres and No. I. Jaeger and M.B.E. at 3·5 metres and No. I. Jaeger.

7. All the cases with rigidity of the pupil did well and the vision on discharge was M.B.E. at 1 to 2 metres in 3 cases and M.B.E. at 2·5 to 3 metres in 4 cases.

8. All the 18 cases with raised tension gave good results, except one in a patient who gave a good deal of trouble during extraction and who had subsequent keratitis; on discharge the patient was only able to count fingers at half a metre. In the rest the vision on discharge was M.B.E. at 1 to 2 metres in 8 cases, M.B.E. at 2·5 to 3 metres in 6 cases, and M.B.E. at 5 metres in 3.

9. All the cases with lowered tension recovered with good vision; the vision was M.B.E. at 1 to 2 metres in 3 cases and M.B.E. at 2 to 4 metres in 3 cases.

10. The lens in this case was partially dislocated upwards and inwards and no history of injury could be obtained; after iridectomy the lens was delivered by manipulation, some cortex being left behind; a subsequent capsulotomy gave a vision of M.B.E. at 1·5 metres.

11. In the case of tremulous lens a tiny macerated nucleus was manipulated out with great difficulty and the patient made a good recovery with vision = M.B.E. at 1·75 metres.

12. No history could be obtained as to the "wherefore" of iridectomy in these 3 cases; in one the iris was tightly adherent to the lens capsule, which was thickened, and in consequence of this adhesion the capsule had to be left behind after extraction of the lens; the patient made a good recovery with vision = M.B.E. at 3 metres and No. I. Jaeger. In the second case the capsule came away entire and the vision was M.B.E. at 2 metres and No. VIII. Jaeger. In the third case the operation was completed without trouble, but on the fourth day another patient injured her eye; she left hospital with vision = M.B.E. at 1 metre.

13. In both cases the stricture was well dilated previously to extraction and the complication in no way interfered with the result: vision = M.B.E. at 2 metres in both cases.

14. The case of albuminuria made an uninterrupted recovery: vision = M.B.E. at 2 metres.

Complications which occurred during operation.—(1) Rotation of the lens during delivery, 2, or 0·8 per cent.; (2) conditions arose demanding delivery of lens by vectis, 3, or 1·2 per cent.; (3) lens delivered in capsule, 1, or 0·4 per cent; (4) lens failed to present till after a further laceration of the capsules, 2, or 0·8 per cent.; (5) lens was expelled by the patient's efforts, 3, or 1·2 per cent.; (6) lens was dislocated during delivery by patient squeezing, 1, or 0·4 per cent.; (7) portions of capsule were removed after the extraction of the lens by means of forceps, 10, or 4 per cent.; (8) the section proved too small and had to be enlarged, 4, or 1·6 per cent.; (9) a presentation of vitreous occurred, 7,[3] or 2·8 per cent.; (10) an incomplete iridectomy was made, 2, or 0·8 per cent.; (11) iridectomy was performed after delivery, 2, or 0·8 per cent.; (12) an involuntary iridectomy was performed by the knife whilst making the section, 4, or 1·6 per cent.; (13) the iris was partially detached by violent and unexpected movements on the part of the patient, 2, or 0·8 per cent.; and (14) the eye proved very inelastic, 5, or 2 per cent.

1. Of the 2 cases in which rotation of the lens occurred during delivery, 1 case had some subsequent keratitis, but eventually made an excellent recovery with vision = M.B.E. at 3·25 metres and No. II. Jaeger; the other recovered without incident and with vision = M.B.E. at 2·5 metres and No. VI. Jaeger. There were 2 other cases in which rotation threatened but was easily prevented by pressing the lens back below the line of section by means of a needle introduced through the wound.

2. There were 3 cases in which vectis-delivery was resorted to; in the first case the lens threatened to rotate and vitreous presented in the wound; the vectis was at once introduced and delivery was effected without perceptible loss of vitreous; vision = M.B.E. at 3 metres and No. VI. Jaeger. In the second case vitreous again threatened to escape, but this time during ordinary manipulative delivery; the lens was delivered with difficulty by the vectis and without perceptible loss of the hyaloid; some iritis followed, but the patient recovered with useful vision which two months after discharge had improved to M.B.E. at 1·5 metres and No. VIII. Jaeger. In the third case the incision for a Morgagnian cataract was made without my assistant's help and a violent squeeze of the eyelids expressed a little vitreous; manipulation failing, the vectis was used and a good recovery ensued; vision = M.B.E. at 1·5 metres and No. X. Jaeger.

3. In 1 case the lens was delivered in its capsule; immediately after its delivery the patient squeezed the lids, causing a slight escape of vitreous; recovery was uneventful and vision was M.B.E. at 1.75 metres.

4. In 2 cases the lens would not present till after a further laceration of the capsule; in 1 case an effort was made to cut the capsule with the knife during section, as the needling had been doubtful; even then the lens presented in its capsule, straining the section, so the capsule was freely divided with the knife over the presenting edge of the lens; a pale nucleus escaped, and on attempting to irrigate the vitreous presented in the wound; the operation was at once stopped and no loss of hyaloid occurred; vision = M.B.E. at 1·5 metres and No. VIII. Jaeger. In the second case, as the lens would not present, a needle was passed through the

[2] The case in which iridectomy was not performed was the same one as that in which irrigation was omitted; the woman was very troublesome and squeezed out the lens as soon as the section was completed; she was so unmanageable that it was thought better to shorten the operation in every way.

[3] In only 3 of the 7 cases was there an actual loss of vitreous, i.e., in 1·2 per cent. of the whole series.

wound and the capsule was freely lacerated; delivery was then effected; vision = M.B.E. at 2 metres and No. X. Jaeger.

5. The lens was expelled by the patient's squeezing in 3 cases in spite of every effort made to prevent such a contingency; in the first case, despite a hypodermic injection of morphine, the patient squeezed violently the moment the section was completed; though a very troublesome patient she made a good recovery with vision = M.B.E. at 3 metres and No. VI. Jaeger. In the second case the patient started squeezing during the section and a free iridectomy was perforce made by the knife; as soon as the section was completed the lens was violently expelled; she made a good recovery with vision = M.B.E. at 3·5 metres and No. I. Jaeger. In the third case the patient would not look down during the section and the iris was in consequence scraped; she then squeezed violently; the section leaked for eight days; vision = M.B.E. at 1·75 metres and No. VI. Jaeger.

6. In 1 case the lens was partially dislocated into the vitreous owing to sudden and violent movements made by the patient during the attempt to deliver it; a farther manipulation, however, delivered it without any escape of vitreous occurring; there was a good deal of subsequent keratitis; vision = M.B.E. at 1·5 metres and No. VI. Jaeger.

7. In 10 cases the capsule was removed (either in part or entire) after the delivery of the lens. In 2 cases vitreous threatened to escape, but without any loss; in 2 the healing of the section was delayed for some days (5 and 9 days respectively); and 1 case had a severe attack of keratitis resulting in very poor vision (able to count figures at 2 feet only); in the other cases vision = M.B.E. at from 2 to 3 metres in 7 cases and at 6 metres in 2 cases.

8. The section required enlarging in 4 cases; this was done with scissors; 1 case made an uninterrupted recovery, two cases had subsequent keratitis, and 1 case ended in suppurative keratitis.

9. In 7 cases the vitreous either presented or actually escaped. This gives a percentage for this accident of 2·8 per cent. against the 2 per cent. under the same heading in my last published series of 500 consecutive cases. Of these 7 cases, in only 3 (1·2 per cent. of the whole) did the vitreous actually escape. As any interference with the vitreous in cataract extraction is of the most serious and far-reaching consequence, the notes of these 7 cases are given somewhat in detail; several of them have been indirectly touched on already. In Case 1 the lens was delivered entire after iridectomy; after the operation was finished the patient suddenly squeezed the eye and a slight loss of vitreous was the result. Vision = M.B.E. at 1·75 metres and No. X. Jaeger. In Case 2, a Morgagnian cataract, contrary to my rule I made the section without having first entrusted the speculum to my assistant; the patient squeezed violently and a slight escape of vitreous was the result; manipulation failed to deliver the lens which was removed with a vectis. Vision = M.B.E. at 1·5 metres and No. X. Jaeger. In Case 3 intracapsular irrigation by MacKeown's method had been employed for a rather soft immature lens in order to separate the cortex from the capsule: after waiting for ten minutes the eye was re-opened, when it was found that a bead of vitreous was presenting; manipulation failed to deliver and more vitreous presented; the vectis, curette, iris forceps, and scoop were tried in turn and the lens was eventually removed in fragments after considerable loss of vitreous. Vision = M.B.E. at 1 metre and No. X. Jaeger. In Case 4 the patient would not look down and the iris was cut in the section, a full iridectomy being performed; a bulky nucleus with sticky cortex was delivered and the anterior chamber was washed out with MacKeown's apparatus; the eye was a flaccid one; a piece of capsule seen in the anterior chamber was removed with iris forceps and the vitreous then threatened to escape; the eye was at once closed and no vitreous was lost. Vision = M.B.E. at 6 metres, and No. I. Jaeger. In Case 5 again the patient looked up and a free iridectomy was performed in section; a bulky nucleus with doughy cortex was delivered with difficulty; a good deal of the cortex was washed out with the irrigator, and a very tough capsule was removed with iris forceps; whilst the iris was being next washed back with the irrigator vitreous presented and the eye was at once closed, fortunately without loss of hyaloid; the patient was very troublesome throughout the operation. Vision = M.B.E. at 3 metres and No. 1 Jaeger. In Case 6 the lens would not present easily and during expression the patient made violent movements; the nucleus and a large cast of cortex (half the circumference) were removed by manipulation and the rest of the cortex sank back into the vitreous and could only have been removed by extensive interference with that body; it was therefore left. There was no escape of vitreous, or very little if any. Vision = M.B.E. at 1·5 metres and No. VI. Jaeger. In Case 7 the capsule was very tough and though the knife was used during section to tear it (the needle having failed) it remained unopened and the lens presented entire in its capsule; the capsule was freely cut with the knife introduced through the wound and a pale cortico-nuclear cataract was delivered. The posterior support of the lens had evidently been injured and vitreous at once presented on attempting irrigation. The eye was closed without loss of hyaloid. Vision = M.B.E. at 1·5 metres and No. VIII. Jaeger.

10. In 2 cases the iridectomy was incomplete—i.e., failed to include the periphery of the iris—owing to difficulties arising out of the patient's nervousness; in both cases recovery was uneventful and the result good.

11. Twice one was obliged to perform iridectomy after the delivery of the lens, as the patient had squeezed out the latter body as soon as the section had been completed. Both made good recoveries and the vision was excellent in both.

12. In 4 cases the iris was involuntarily cut in section; on each occasion the accident was due to the patient looking upwards, contrary to orders, during the section. When one sees that the iris has got foul of the knife, one always endeavours to make a free iridectomy with the latter during the section. All 4 cases made uninterrupted recoveries, with excellent vision.

13. The iris was partially detached in 2 cases owing to the patients making sudden movements during iridectomy; in one case there was free hæmorrhage and in the other there was slight keratitis during delivery. Both recovered with excellent vision.

14. In 5 cases the eyeball was very inelastic; in 1 case the chamber contained some blood the day after operation, another had some conjunctival congestion for a while, and a third had suppurative iritis. The results were vision = M.B.E. at 2 to 3·25 metres in 3 cases and at 6 metres in 1 case. The last one recovered with only perception of light.

Complications arising after operation.—(1) section remaining ununited for several days, 17, or 6·8 per cent.; (2) section burst by patient rubbing or striking the eye, 8, or 3·2 per cent.; (3) effusion of blood into anterior chamber, 13, or 5·2 per cent.; (4) impaction of portions of iris in the section, 6, or 2·4 per cent.; (5) marked congestion of the conjunctiva, 10, or 4·0 per cent.; (6) suppurative iritis, 4, or 1·6 per cent.; (7) suppurative keratitis, 1, or 0·4 per cent.; (8) iritis or threatened iritis, 10, or 4·0 per cent.; (9) keratitis mostly very slight in degree, 33, or 13·2 per cent.; (10) flap not in correct apposition, 4, or 1·6 per cent.; (11) spasmodic entropion, 3, or 1·2 per cent.; (12) inflammation of a pterygium, 1, or 0·4 per cent.; and (13) presence of a secondary membrane calling for a secondary operation, 17, or 6·8 per cent.

1. In most of the 17 cases the section remained ununited or leaky for five or six days; the longest period was 11 days and the shortest two days. All did well and the vision was M.B.E. at 1 to 2 metres in 6 cases, at 2·25 to 3 metres in 9 cases, and at 5 to 6 metres in 2 cases.

2. In 8 cases the section was burst by the patient rubbing the eye; in one of these blood was effused into the anterior chamber and discission of the capsule formed had to be undertaken later. The vision was M.B.E. at 1 to 2 metres in 3 cases and at 2 to 6 metres in 5.

3. In 13 cases blood was found in the anterior chamber after operation; in most of these cases this was probably due to interference on the patient's part. All did well and only the case referred to just above required subsequent needling. The vision was M.B.E. at 1 to 2 metres in 9 cases and at 2·75 to 4·75 metres in 4 cases.

4. In 6 cases a tag of iris became impacted in the section;[4] in 2 of these cases it was subsequently excised after opening up the section; in the other four it was very

[4] My experience of prolapse of the edges of the iris after the combined operation is that one never meets with the same acute signs and symptoms in this condition as one encounters in prolapse of the iris after the simple operation.

small and gave rise to no symptoms, so it was left alone. Every case was watched carefully throughout the series for entanglement of the iris; it is possible that a percentage of these 6 cases may have been due to the iris edges having been incompletely returned at the operation. But I do not think this was the case, and I believe they were cases of prolapse. The vision was M.B.E. at 2 metres in 4 cases and at 4·5 and 6 metres respectively in 2 cases.

5. Congestion of the conjunctiva sufficient to demand a note occurred in 10 cases; it did not seriously complicate treatment in any and all did well.

6. There were 4 cases of suppurative iritis. In Case 1, capsulo-lenticular cataract, iritis commenced gradually on the fourth day and continued to increase in spite of active treatment (atropin, leeches, fomentations, purging, antiseptic irrigations, &c.); *the general health was not good at the time of operation.* One is often obliged in India to operate at once in cases which would be better for delay, as the patient cannot afford to wait. Vision = perception of light. Case 2 had been *under treatment for the lids* (catarrh) for 31 days; the lens was bulky; severe iritis set in the day after operation and was but little influenced by treatment. Vision = perception of light. Case 3 had been *treated for eight days for conjunctival congestion before operation;* the lens was bulky; suppurative iritis set in on the day after operation and its course was barely modified by active treatment; vision was lost. In Case 4 the conjunctiva was normal, the lens was bulky, and the eye was very inelastic; *several unsuccessful attempts were made to remove a piece of capsule* with iris forceps; severe iritis set in on the third morning and again active antiphlogistic treatment was adopted. On the next day the anterior chamber was well washed out through the reopened wound with chinosol solution (1 in 6000) for six minutes. Subsequently the conjunctival sac was freely irrigated thrice daily with the same solution. The chinosol appeared to exercise a very marked effect on the course of the inflammation. Vision = perception of light only.

7. One case of suppurative keratitis occurred; the conjunctiva was normal; the lens failed to present till after enlargement of the section with scissors; the patient was very stupid. On the third morning a rim of pus was seen round the section which on the seventh day had increased to well-marked suppuration. The patient went out on the twenty-fourth day with some flattening of the cornea. V. = perception of light.

8. There were 3 cases of iritis and 7 cases in which that condition threatened; in every case active antiphlogistic and antiseptic treatment was adopted without delay and all made good recoveries. Vision = M.B.E. at from 1·75 to 3 metres in 9 cases and at 6 metres in 1 case. In all three cases of iritis an operation was required for the treatment of secondary cataract.

9. In only one of the 33 cases of keratitis was the condition at all serious; vision in this case equalled counting fingers at 2 feet; all the rest were slight cases and hardly even modified the course of recovery.

10. In 4 cases the flap was in faulty apposition and in 3 cases the fault was sufficient to require rectification, the flaps being replaced under cocaine; all made good recoveries with vision = M.B.E. at 2 metres.

11. Spasmodic entropion occurred in 3 cases and was met in each case by the removal of all dressings, the eye being left open. In one of these cases the eye was again closed after the lid appeared to have recovered its tone, as the section had not closed; the entropion recurred within 24 hours, causing free lacrymation, &c.; on again opening the eye and leaving it open not only did the entropion subside but the section soon healed. Vision in the 3 cases = M.B.E. at 2·5, 4, and 6 metres respectively.

12. In one case a pterygium was inflamed; the conjunctiva had been in an unhealthy state before operation and had been treated for the same; the patient rubbed the eye and burst the section and the prolonged bandaging thus rendered necessary irritated the pterygium. Convalescence was delayed and vision = M.B.E. at 1·5 metres.

13. In 16 cases capsulotomy was performed for secondary membranes; of these cases 2 followed iritis, in 9 cases cortical matter had been left behind, in one blood was effused into the anterior chamber owing to an injury, and in 4 cases the capsule itself was at fault. Vision = M.B.E. at from 1 to 2·5 metres in 10 cases and at from 3 to 6 metres in 6 cases. In the case in which iridotomy was performed the pupil was blocked by a dense membrane the result of iritis; after operation vision was M.B.E. at 2 metres.

Vision on Discharge.

Counted M.B.E. at from 1	to 2 metres	121,	or 48·2	per cent.
,, ,, ,, 2·25	,, 3 ,, ...	68,	,, 27·2	,,
,, ,, ,, 3·25	,, 4 ,, ...	24,	,, 9·6	,,
,, ,, ,, 4·25	,, 5 ,, ...	10,	,, 4·0	,,
,, ,, ,, 5·25	,, 6 ,, ...	17,	,, 6·8	,,
Recovered with useful vision...		240,	,, 96·0	,,
Counted fingers at from half a metre to 1 metre; very poor results, but better than before operation		5,	,, 2·0	,,
Perception of light only retained		4,	,, 1·6	,,
No vision		1,	,, 0·4	,,
Failures		5,	,, 2·0	,,

Near Vision.

Counted the dots of No. I. Jaeger	36,	or 14·4	per cent.
,, ,, No. II. ,, ...	15,	,, 6·0	,,
,, ,, No. III. ,, ...	2,	,, 0·8	,,
,, ,, No. VI. ,, ...	92,	,, 36·8	,,
,, ,, No. VIII. ,, ...	60,	,, 24·0	,,
,, ,, No. X. ,, ...	33,	,, 13·2	,,
,, ,, No. XII. ,, ...	2,	,, 0·8	,,
Recovered with useful vision	240	,, 96·0	,,
Counted fingers at from half a metre to 1 metre	5,	,, 2·0	,,
No near vision	5,	,, 2·0	,,

In testing the vision on discharge only spheres were used and even with these a full test could not be given owing to press of work; add to this that many of the patients were very illiterate and ignorant and that routine necessitated their being tested on discharge (about a week after operation), and it will be conceded by most that the visual results given above were probably in most cases much below the actual standard obtained. Certain it is that one's private cases, which differ from the hospital cases only in superior education and in the fact that one tests them oneself with more leisure than it is possible for the assistant surgeon to give to such large numbers as are dealt with in Indian hospital practice, give much better results. With them, of course, one corrects the astigmatism. I may repeat that a vision of M.B.E. at 6 metres corresponds with a vision of $\frac{6}{9}$ as obtained by the types. This result has been obtained by careful comparative experiments with educated patients after extraction.

To my late assistant Mr. Collins, in subordinate medical charge of the Madras Government Ophthalmic Hospital, I owe my best thanks for the skill with which he always helped me and for the painstaking care which he devoted to the compilation of statistics from my notes.

Madras.

THE RELATION OF MECONIUM TO THE FŒTAL APPENDIX.

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IN his recent Hunterian lectures on the Anatomy and Pathology of the Vermiform Appendix Mr. W. McAdam Eccles in discussing the question of the physiology of the vermiform appendix stated that "the lumen of the appendix is never a receptacle for meconium, so that it would not appear likely that the appendix often has any liquid contents other than what it has itself secreted to absorb."[1]

In the course of a systematic examination of the fœtal abdominal viscera I had frequently noted the presence of meconium in the appendix and on looking up the literature of the subject I have so far been unable to find any reference to this fact; hence I think it well to publish my notes bearing on this point. The accompanying table sets forth the disposition of the meconium in the intestine in the case of 25 consecutive fœtuses. In every case the fœtus was in good preservation and the abdomen was examined while the

[1] THE LANCET, March 14th, 1903, p. 703.

TABLE GIVING A SUMMARY OF OBSERVATIONS ON THE DISPOSITION OF THE MECONIUM IN THE INTESTINES OF 25 HUMAN FŒTUSES.

No.	Sex.	Age of fœtus in months.	Length of fœtus in millimetres.	Appendix. Length in millimetres.	Appendix. Diameter in millimetres.	Contents of the small intestine.	Contents of the large intestine.	Contents of the appendix vermiformis.
1	Female.	3½	106	7	0·75	Empty.	Empty.	Empty.
2	Male.	4½	200	12	1·0	In the lower portion a small amount of light-green meconium.	,,	,,
3	Female.	4½	205	11	1·5	In the lower two-thirds darkish-green meconium.	Meconium in the cæcum and ascending colon.	Darkish-green meconium in the whole length.
4	Male.	5	230	17	1·0	Light-green meconium in the lower half.	Empty.	Empty.
5	,,	5	232	21	1·0	Dark-green meconium in the lower part.	Meconium in the sigmoid flexure and rectum; the cæcum was empty.	,,
6	Female.	5½	236	24	1·5	Dark-green meconium in the lower half.	Darkish-green meconium in the whole length.	Dark-green meconium in the distal half.
7	Male.	5½	270	21	2·0	Light-green meconium in the lower part.	Dark-green meconium in the cæcum and rectum.	Dark-green meconium in the proximal half.
8	Female.	5½	270	14	2·0	Light-green meconium in the lower half.	Dark-green meconium in the cæcum, sigmoid colon, and rectum.	Dark-green meconium in the whole length.
9	,,	6	282	18	2·25	Traces of greenish meconium.	Meconium distended the sigmoid colon, and rectum; a small amount in the cæcum.	A trace of meconium along the whole length.
10	,,	6	284	21	2·0	Greenish meconium in the lower fourth.	Dark meconium distended the sigmoid colon, and rectum; a small amount in the cæcum.	Filled with dark meconium except the distal four millimetres.
11	,,	6	290	20	1·25	Light-green meconium distended the lower half.	Dark-green meconium in the whole length.	Dark-green meconium in the whole length.
12	Male.	6	292	22	2·0	Traces of brownish meconium.	Meconium in the sigmoid colon, and rectum; the cæcum was empty.	Empty.
13	Female.	7	337	32	2·5	Whitish granular débris in the lower half.	Greyish granular débris distended the rectum; a small amount in the cæcum.	Greyish granular débris in the whole length.
14	,,	7½	380	22	2·75	Light-green meconium in the lower half.	Dark-green meconium in the whole length.	Filled with dark meconium except the distal four millimetres.
15	Male.	7½	380	32	3·0	Traces of meconium.	Dark-green meconium in the whole length.	Dark-green meconium in the whole length.
16	,,	8	392	32	2·0	Light-green meconium in the lower part.	Dark-green meconium distended the whole length.	Dark-green meconium in the whole length.
17	Female.	8	392	18	2·5	A small amount of meconium in the lower part.	Dark-green meconium in the whole length; small amount in the cæcum.	Meconium in the whole length except distal four millimetres.
18	,,	8½	418	35	3·5	Light-green meconium in the lower fourth.	Dark-green meconium in the whole length.	Distended with dark-green meconium except the distal 10 millimetres.
19	,,	8½	430	45	5·0	No solid contents; distended with gas.	Dark-green meconium distended the rectum; gas distended the rest of the intestines.	Distended with gas right to the apex.
20	,,	8½	432	20	2·0	Traces of darkish meconium in the lower part.	Dark meconium distended the lower part; a small amount in the cæcum.	Dark meconium in the distal 12 millimetres.
21	,,	9	463	40	3·0	Dark-green meconium in the lower part.	Distended with dark-green meconium.	Filled with dark-green meconium in the whole length.
22	,,	9½	480	42	3·0	Dark-green meconium in the lower end.	Dark-green meconium in the whole length.	Filled with dark-green meconium to within three millimetres of the apex.
23	,,	Nearly full time.	490	35	3·5	A small amount of meconium in the lower end.	Distended with dark-green meconium in the whole length.	Filled the whole length with dark-green meconium
24	,,	,,	495	45	3·0	Dark-green meconium in the lower third.	Dark-green meconium in the whole length.	Dark-green meconium in the whole length.
25	Male.	Full time.	560	60	4·0	Rather distended with dark-green meconium in the lower third.	Only traces of dark-green meconium in the whole length.	Distended with dark-green meconium in the whole length.

fœtus was still quite fresh. In the table the notes have been rearranged according to the approximate age of the fœtus.

Case 13 is of interest as in this fœtus there was obliteration of the bile-ducts and the meconium was represented by greyish granular débris. Case 19 was a premature child who lived for 24 hours. The abdomen was examined 12 hours after death and it was found that meconium was present in the rectum only and that the rest of the alimentary canal, including the appendix, was distended with an inodourless gas. This gas could be squeezed from the appendix into the cæcum and on removing the pressure the gas again re-distended the appendix. Case 25 was the fœtus from a case in which labour was protracted and instrumental. Here the large intestine was contracted and contained only slight traces of meconium, while the appendix was quite distended with dark-green meconium.

Although the series of fœtuses examined is small, still from the tabulated facts it appears that the disposition of the meconium with regard to the different portions of the fœtal intestinal canal is as follows:—

1. *Small intestine.*—Meconium begins to distend the lower half about the middle of the fourth month and continues to do so to a variable extent till the end of fœtal life.

2. *Large intestine.*—Meconium begins to distend the rectum about the beginning of the fifth month, thereafter tending to accumulate in the cæcum and then gradually distending the whole of the large intestine, so that after the seventh month dark-green meconium distends the large intestine in its whole length.

3. *Appendix vermiformis.*—Meconium was noted to be present in the appendix as early as the middle of the fourth month and thereafter in nearly every case it was present in the appendix till the end of fœtal life. The amount of meconium in the appendix varies; it seems to depend somewhat on the condition of the cæcum—if the cæcum is distended then the appendix is always distended, but there may be meconium in the appendix while the cæcum is practically empty.

Aberdeen.

A CASE OF ACUTE YELLOW ATROPHY OF THE LIVER.

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AND

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ACUTE yellow atrophy of the liver is so very seldom met with that there is little chance for the accurate study of its causation and minute pathology or for the clinical recognition of the significance of its group of symptoms. I [W. F.] venture, therefore, to publish the notes and comments on the following case of this affection which came under my care in 1900, trusting that it may be of interest to the readers of THE LANCET.

It was not until the year 1836 that this disease was first recognised and described by Bright, although prior to that year a few cases having a similar grouping of symptoms were reported by prominent physicians of their period. Bright described it as a diffuse inflammation of the liver, affecting the glandular substance more than the connective tissue, causing diminution in the size of the whole organ, and being characterised by jaundice associated with hæmorrhages and severe nervous symptoms. Busk and Handfield-Jones were the next English physicians to study its microscopical pathology and they pointed out that the liver cells themselves underwent a definite degeneration. Since that time various accounts of the disease have been published by physicians of many nationalities, but no definite conclusions can be arrived at as to its origin and causation. I have reported the case as presented in the hospital and Mr. Clayton Greene supplies the microscopical pathology and remarks at the end.

An unmarried woman, aged 23 years, was admitted to the Greenwich Infirmary on May 28th, 1900, suffering from jaundice. Her mother said that she had always been in good health, with the exception of a sore throat occasionally, till April 12th or thereabouts in 1900, when she caught cold and was laid up for a week with a bad throat; this, however, got better and the patient went to her work regularly till about May 5th, when she was seized with jaundice, general malaise, and pain in the abdomen and had to stay at home and receive medical attendance. Sometimes she was obliged to stay in bed owing to intense sickness, flatulence, and severe cramp in the legs, but on other occasions she felt better and was up and about the house. As the jaundice did not disappear her medical attendant thought that it was advisable to send her to the infirmary. According to the personal history of the patient which was obtained from her mother she had had measles when a little child but had never suffered from rheumatism or chorea. She was always regular in menstruation. She was very reticent as regards her *affaires du cœur*, but she admitted to her mother that she used to "walk out" with a man who just prior to her illness had left to take part in the Boer war. She had no other trouble or worry that her mother knew of. As regards the family history the patient's mother was well in health and her father, who drank freely, died from phthisis at the age of 38 years. Two brothers died in infancy and a sister had died seven years before with uræmic coma. One brother is alive and well.

On admission to the infirmary the patient was seen to be well nourished, well developed, and inclined to obesity. The skin was coloured a deep yellow from head to foot. The conjunctivæ were a bright yellow. The pupils were dilated, the reflexes being normal. The respirations were normal and the pulse was 96, regular in force and frequency and moderately compressible. To any question put to her her answer was the same—viz., her surname. The tongue was dry and coated with a pale brown fur, except at the tip and edges. The abdomen moved well on respiration and was not distended. The spleen or the edge of the liver could not be felt. Deep palpation below the right costal border caused the patient to wince as if in pain, but she did not complain of anything. The liver dulness could only be obtained for one inch on a level with the sixth rib in the vertical nipple line. The lungs appeared to be normal. A soft puffing systolic murmur could be heard over the pulmonary area of the heart; elsewhere the sounds were normal and no murmur was audible. At the time of admission she was menstruating.

The progress of the case was as follows. On the night of the 28th she slept well, having taken a pint of milk and soda-water. She did not vomit and she passed urine involuntarily. One and a half ounces of compound mixture of senna were administered. The bowels were not opened. On the 29th she was very strange in her manner during the day and was constantly trying to get out of bed. She took food well, consisting of milk, beef-tea, and soda-water. There was an evacuation after an enema. The temperature at 6 P.M. was 98·8° F. The urine was drawn off with a catheter and was tested; the result showed an acid reaction, the colour being dark brown; it was clear and its specific gravity was 1016. It contained no albumin and no sugar. On evaporation and examination under the microscope leucin crystals were seen. Gmelin's test for bile pigment gave a positive result. A diagnosis of acute yellow atrophy was made. At night the patient was very restless till 11 P.M. She retched once but did not vomit, and she slept heavily the rest of the night. The bowels were not opened, but she passed urine involuntarily. On the 30th the temperature at 10 A.M. was 98·8°. The abdomen still appeared to be tender in the right hypochondrium on deep palpation. The patient did not speak all day; she was very restless, she groaned occasionally, and tried to get out of bed several times, but she took nourishment well. The bowels were opened very slightly; the motions were dark brown in colour and were formed. The pulse was 112, soft and compressible. The temperature at 6 P.M. was 99°. During the night she was very restless, sleeping only for short intervals, constantly moaning, and throwing the clothes off. She still, however, took nourishment well and there was no vomiting. She passed urine involuntarily. Between 4 and 5 A.M. the patient had two convulsive seizures, with twitchings of both arms and face, and she remained rigid after 5 A.M. The rigidity passed off about 9 A.M. on the 31st; the temperature at 10 A.M. on this day was 101°. The patient was unconscious all day.

She took 18 ounces of milk with great difficulty in swallowing. The pulse was 116 and was feeble. Blood and mucus flowed slowly from the mouth. An ice-bag was applied to the head. The bowels were not opened but urine was passed involuntarily. At 6 P.M. the temperature was 102°. The patient was still unconscious. The respirations were laboured and stertorous. At 10 P.M. the temperature was 102·8°. The patient took two ounces of milk. Coma passed into death at 11.40 P.M. Hæmorrhage took place from the nose after death and a slight discharge from the mouth continued.

At the necropsy the subcutaneous fat was found to be about one inch in thickness. The liver weighed 23 ounces; it was smooth and flabby and presented a very mottled appearance both on the surface and on section, the patches being either of a washed-out yellow colour or reddish-brown. The lobules could not be distinguished. The spleen was not enlarged and weighed five ounces. The kidneys were normal in size and smooth and the capsules stripped easily. There were numerous hæmorrhages in the great omentum, mesentery, appendices epiploicæ, pancreas, and coats of both large and small intestines. There was a large recent corpus luteum in the right ovary which was half as large again as the left. A collection of blood and mucus was found in the interior of the fundus uteri, nearer the opening of the right Fallopian tube than the left. The heart was normal in size but flabby. The orifices were not contracted. There were two little patches of five or six minute vegetations no larger than a pin's head on the auricular surface of the mitral valves. Unfortunately, permission to open the skull could not be obtained, but undoubtedly hæmorrhages would have been found there.

Microscopical pathology and remarks by Mr. CLAYTON-GREENE.—The liver stained with hæmatein. The capsule was not thickened but was thrown into folds; the greater part of the liver substance was entirely destroyed, its place being taken by an ill-defined faintly staining granular material which appeared to represent atrophied liver cells and ill-formed connective tissue—to this connective tissue Ziegler applies the term "proliferous." Beneath the capsule there were a few vacuolated liver cells in scattered groups and around these the connective tissue seemed more active, the nuclei staining better, the appearance presented being that of a cellular exudation around a nucleus of liver parenchyma—this particular form of cellular exudation is called by Ziegler "hyperplastic" and is well contrasted with the above degenerated tissue to which the term "hypoplastic" may well be given. There was no evidence of the pseudo proliferation of the bile-ducts in the form of epithelial columns, which has been described as usually coexistent with the other changes. There was, however, a large amount of brownish-green pigment scattered over various parts of the specimen. Under a high power it appeared crystalline. This pigment was well seen in unstained sections and could be made out in some of the blood-vessels. Counterstained with van Gieson's stain there was a faint attempt at differentiation between the atrophic connective tissue and the atrophied liver cells, the former taking on a faint pink stain and the latter a dull brown. The faint reaction of the connective tissue to this stain was a further proof of its degenerated character. Stained by Marchi's method the liver was shown to have undergone a most extensive fatty degeneration. Many parts of the section were seen to be so covered with large and small black globules that the structure of the tissue was entirely obscured. The kidney: stained with hæmatein. The cortex: the capsule was not thickened, the glomeruli were vacuolated, and their epithelium, together with that of Bowman's capsule, was in some places proliferating and desquamating. There was a small amount of exudation between the tuft and its capsule. The nuclei of these parts stained well. The tubules around the glomeruli had undergone extensive degenerative changes; the epithelium was cloudy and granular, all striation was lost, and the cells had in some place swollen up to such an extent that they appeared to occlude the lumen of the tubules; their nuclei stained badly. In addition there was a large quantity of greenish-brown pigment scattered about, but situated principally at the bases of the degenerated tubular cells. A small quantity appeared in places in the glomerular tuft and in its capsule whilst in the intertubular tissue a few granules could also be seen. This pigment appeared to be similar to that described in the liver, but it was finer; it occurred in smaller masses and it did not appear to be so distinctly crystalline. In some of the tubules casts of various sizes were to be seen, mostly colloid in character, and many of them coloured a distinct green. The medulla: the vessels were engorged and the tubular epithelium was again found to be in various stages of degeneration. The pigment was again to be noticed, but it was not present in the same amount as in the cortex. Counter-stained by van Gieson's stain some increase in the intertubular connective tissue was seen, but the proliferation of the cells was not active. Stained by Marchi's method extensive fatty degeneration of the kidney substance was shown. Some of the fat lay between the glomerular tuft and its capsule and was formed presumably by the breaking down of the mass of desquamated and necrosing epithelium. The glomeruli were practically free from it. The heart stained by hæmatein. The fibres appeared fragmented, especially towards the endocardial side, where the nuclei in some places did not stain so well. The striation of the fibres was obscured. There was a good deal of pigment scattered among the muscle fibres, especially near the endocardium; this pigment, however, was more granular than that in the kidney or liver. Stained by Marchi's method advanced fatty degeneration of the myocardium was shown, but this existed only in certain places. It was best shown a few millimetres from the endocardium in the region of the deposit of pigment. Under a very high power fragmentation of the nuclei and an appearance of commencing brown atrophy were shown. Subsequent investigation of the character of the pigment deposited in the liver and other organs showed the following results:—Cholesterin appeared absent and there was no micro-chemical reaction for bile salts obtainable. The crystalline pigment was insoluble in boiling water—a feature which distinguished it from leucin and tyrosin crystals, none of the latter being visible. The pigment did not react to Perl's iron test, nor was any free iron to be found by this reaction in the tissues. The examination for micro-organisms was entirely negative. All the viscera were examined by the various methods in ordinary use.

Amongst the many points of interest in the clinical and pathological aspects of the case some more than others appear to me to be worth discussing. Absence of pyrexia until quite at the last, as in this case, appears to be an exception to the usual course of these cases. Possibly the presence of a normal temperature in the early stages indicates a slowly progressive poisoning which does not at first excite tissue reaction. With the supervention of a more acute process the temperature rises. The persistence of the jaundice is a feature of great interest, since if the degree of disintegration of the liver substance found after death be considered along with the duration of the disease it would be reasonable to expect some diminution in the amount of pigmentation if the explanation of the mode of production of jaundice, always by obstruction, is to be relied on. Such diminution did not take place. Quite early in the disease the liver dulness was markedly diminished—pointing to lessened bulk—so that at this period the destruction must have been far advanced. No diminution in the amount of jaundice appears to have taken place and after death a great amount of pigment was found in other viscera and this pigment could not be differentiated micro-chemically from hæmatoidin and other blood products. The quantity in the liver was not much in excess of that in other viscera, such as the kidney, and it would be out of the question with the specimens of the liver as presented under the microscope to imagine any obstructive or bile-formative process possible.

Concerning the pathology of the disease, it is only possible, with material so limited at my disposal, to make certain suggestions. That the disease is the result of a poisoning there is, I think, no doubt. What is the source of the poison?

There does not appear to be any satisfactory proof that the initial lesion is in the liver only—the term "acute yellow atrophy of the liver" was given by Rokitansky from the obvious post-mortem changes seen in this organ, but it seems that this liver change is only one of the many effects of the disease. If the condition is compared with other similar hepatic conditions it will appear that all the symptoms are those of a general infection. In the case of phosphorus poisoning—and there is absolute freedom from all suspicion of this here—a poison is ingested and conveyed to the circulation from the alimentary canal. After a period of quiescence during which the poison must be working, urgent symptoms come on and the patient dies. The

iver, heart, kidneys, &c., are affected, fatty degeneration being marked, largely so in the liver, owing to its anatomical situation at the head of the portal vein, but in other organs as well. Again comparing this disease with the cirrhoses, and especially with the hypertrophic form—diseases which, accepting Adami's explanation of coli infection, are due to poisons acting on the liver and other organs, such poisons being derived from the alimentary tract—we must allow great similarity. Given only a greater degree of virulence of the toxin or organism and a greater dissemination in acute atrophy and the two conditions lie side by side. Micro-organisms have been described in this condition of acute yellow atrophy. I entirely failed to find them, but that does not exclude the possibility of the lesions being due rather to the toxins than to the organisms themselves. The condition of the patient was not unlike that produced by pernicious anæmia and possibly the blood examination of these cases may throw further light on the subject. Unfortunately in this case no examination was made.

In conclusion, I must say that the theory already advanced by others that the condition is one of toxæmia with resulting changes in the viscera is the one which most satisfactorily explains the clinical and pathological features and the source of the toxæmia is in all probability the intestinal tract. It is true that so far no lesions have been described there, but that detracts little from the value of the explanation since it is quite possible for an infective process of great magnitude to be started from a lesion so small as to be overlooked as is the case in so-called "idiopathic tetanus." With regard to the pigment found post mortem I think it is strongly suggestive of a hæmolytic action of the poison causing the disease. I do not think a liver showing the amount of destruction that was shown in this case could have been capable of elaborating any pigment, nor was there sufficient iron present in the liver to warrant the assumption that the blood cells were destroyed there. The suggestion that the pigment had been stored up in the liver and was set free with its destruction is, I think, inadequate. Again, there was a close relationship between the amount of pigment and the fatty change. Wherever the pigment was most thickly deposited there the fatty change was most advanced. This, I think, allows of the suggestion being made that the pigment is a poisonous product of hæmolysis—a combination of toxin and blood pigment capable of producing cell pigmentation and destruction in different parts of the body. A similar phenomenon has been observed by some American workers in relation with cirrhosis of the liver, pancreas, &c., and the term "hæmochromatosis" has been applied to it. In those cases, as in this, the suggestion has been put forward that the pigment is poisonous. I would, therefore, urge that the case from a clinical and pathological standpoint supports the view that the disease is not primarily hepatic in origin, the liver only suffering with other parts; that there is a hæmic infection with micro-organisms or their toxins with subsequent hæmolysis; that there is a combination of toxin and blood pigment to form a poisonous compound which is injurious to the tissues and causes their discolouration; that the liver must be absolved from the charge of forming the pigment, but that it is formed in the blood-vessels themselves; and that the source of the mischief must be sought for in some part of the alimentary canal.

THE DIETETIC FACTOR IN HEALTH-RESORT TREATMENT.[1]

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I THINK that it will be conceded that one of the principal objects of the British Balneological and Climatological Society is to bring before the members of our profession, and so indirectly before the public, the claims and advantages of the British spas and health resorts as compared with those of foreign countries. Another object is by discussion amongst its members, and by endeavouring to bring the methods of treatment at our health resorts into line with modern methods and modern ideas, to enhance the utility and popularity of those resorts, and so to bring home to the members of our profession and to the public generally the fact that the benefits to be obtained at the foreign spas are in an equal degree obtainable at our own spas and health resorts. We wish to make it clear that, unless a complete change of environment is desired by our patients or is essential to their recovery, treatment can in the great majority of cases be carried out as effectually in our own country as abroad.

As regards balneological and climatological treatment there is little to be desired at our various spas, but in two particulars there is still room for considerable improvements which, in my opinion, will do more than anything else to popularise and to increase the attractiveness of our health resorts—viz., the provision of better dietetic treatment suited to the needs of the patients visiting the spas, and the infusion of greater gaiety into the daily life by the provision of more abundant amusements. It is in these two particulars that our spas and health resorts fall short of those on the continent and it is the comparative lack of these two conditions which induces many of our patients to go abroad. We are not dealing now with the question of amusements and I therefore confine my remarks to the subject of this discussion. I think that one of the main causes why insufficient attention is given to dietetic treatment at our spas and health resorts is on account of the tendency for the catering for our patients to drift more and more into the hands of companies whose main object is the production of large dividends, while but little attention is directed to the dietetic requirements of those for whom they are catering. At too many of our health resorts one sees nowadays palatial hotels, elaborately upholstered and provided with the prolonged many-coursed, heavy meals which are so absurdly considered by their providers to be essential to physiological necessities and to the recovery of health. I must confess that although recent experiences in London, especially in the borough in which I live, have not greatly enamoured me of municipal trading, yet I cannot help thinking that it would probably be an advantage to our spas and health resorts if the catering for the visitors were more or less under the control of the municipal authorities. Medical men would probably then be able to have their views as to the provision of suitable meals much more efficiently carried out than at present, while the cost of living at the spas would be considerably reduced.

I agree with the statement that the large majority of cases requiring dietetic treatment at spas are cases of gout, obesity, and glycosuria, to which list I would add cases of rheumatoid arthritis. As there is a fairly general accord as to the dietetic treatment of obesity and glycosuria I shall confine my remarks to the dietetic treatment of gout and rheumatoid arthritis at spas. Gout I regard as a disease which is due to faulty metabolism, probably both intestinal and hepatic, as the result of which certain poisons (possibly the purin and other bodies of which we at present know but very little) are produced and lead to an auto-intoxication which is an early factor in the development of the gouty condition. Certainly I think that with our increasing knowledge and experience uric acid and its salts will in all probability have to be relegated to a position of subsidiary importance in the pathogenesis of gout.

As regards the question of diet it must be remembered, on the one hand, that animal foods constitute to the majority of people the most attractive and appetising forms of diet and are therefore likely to be taken in excess, and hence the necessity for limiting the amount to be taken, but, on the other hand, it must be borne in mind, in connexion with life at spas, that the exercise taken, the leisure permitted for digestion, and the stimulus of the baths all tend to increase the combustion and the oxidative powers within the tissues, while the large amount of water consumed tends abundantly to remove the waste products. In my opinion it is absolutely erroneous to exclude from the dietary of the gouty such articles as meat, fish, and tea, because they are assumed to contain uric acid. I have yet to learn that any uric acid is present in those articles of diet, since the so-called estimations of uric acid in them are not, as I have previously pointed out, estimations of uric acid at all. Moreover, the deduction is an erroneous one that because uric acid is a nitrogenous body it must therefore be directly derived from nitrogenous constituents of the food, the consumption of which must therefore be avoided. Even if uric acid were present in the articles of food referred to it would not alter my opinion as to their

[1] A paper read at the opening of the adjourned discussion at the British Balneological and Climatological Society on the Dietetic Factor in Health-Resort Treatment, April 22nd, 1903.

suitability, considering that they have stood the test of so prolonged a trial. Yet there are some who do not hesitate to call these articles of food, which are so extensively consumed, poisons, mainly, as far as I can gather, because these foods do not happen to agree with themselves. It is true that there are a few persons (whom, without any intention of being offensive, I should describe as physiological degenerates) who find that such articles of food do not agree with them, but it is illogical to argue from such a premiss that therefore they are unsuited to the great majority whose digestive functions are more happily regulated.

The diet of gouty patients undergoing spa treatment should be simple—that is, the meals should not be made up of too many articles. Simplicity of food means facility of digestion. Certainly meat, even red meat, should not be excluded from the diet. No class of foodstuff is so productive in energy as animal food, and as most cases of chronic gout are suffering from lowered vitality and want of tone animal food in at all events moderate quantity is distinctly indicated. My experience supports the truth of this view, as I advise in the great majority of cases of chronic gout the taking of at least one meat meal a day. The exclusion of any article of diet or of any class of food without taking into account the surroundings of the case and the peculiarities of the individual is unscientific. Those articles of diet that are known in the individual to favour intestinal fermentation and putrefaction should certainly be avoided, and it may be taken, I think, as a general rule that a sense of discomfort after a meal indicates that some article or articles of food have been taken which are not beneficial to the individual in his present condition. I attach great importance in such cases to the reduction of the starchy articles of food, but not to the total exclusion of what I believe to be the comparatively harmless potato. It is remarkable how frequently one hears from gouty patients the emphatic statement, "I never eat potatoes." I must confess that I do not know of any good and sufficient reason for this wholesale condemnation of such a common article of diet. Undoubtedly amongst those gouty patients who suffer from an inability to digest starchy articles of diet perfectly—in other words, who suffer from amylaceous dyspepsia—a reduction for the time in the amount of starchy foods taken, including potatoes, is desirable; but the recognition of the existence of amylaceous dyspepsia is a fairly easy matter and when present it can be suitably treated. Certainly those persons who are gouty and who are also fat should be very sparing in the use of potatoes as of other carbohydrate forms of food. I wish, however, to protest against the too general exclusion of so common and useful an article of diet as the potato from the food of the gouty. Equally wrong, in my opinion, is the total exclusion of sugar from the dietary of all gouty individuals. Undoubtedly, in certain individuals sugar may do harm, as in the cases of gouty persons who are fat, or who suffer from glycosuria, or who are prone to attacks of eczema, and in such it should be cut off; but that is no reason for the exclusion of it from the dietary of all gouty patients, especially those who are at the same time gouty and thin. I know of many gouty individuals who take sugar with absolute impunity. Some gouty subjects undoubtedly digest starchy articles of diet very badly, and in such fats may well take the place of starches. Fat bacon, properly cooked, is generally well digested by gouty individuals.

A fair proportion of vegetable food should be taken with two meals each day. The choice of vegetables will depend upon the digestive capacity of the patient, but, excepting the potato, as a rule those vegetables that grow above ground are preferable to root vegetables.

Stated as a general principle a person who is subject to gout is better without alcohol in any form. There are, however, some who require a little alcohol, either to aid digestion or to enable them to get through their work, and here I am entirely in accord with the advice give by Dr. J. F. Goodhart, that if a man requires any stimulant at all it is a matter which he must decide by experiment for himself, for no medical man can tell him. If alcohol is necessary or desirable the form in which it is to be taken is frequently a matter which the patient can decide better than the medical man; but I would insist upon the importance of definitely limiting the amount to be taken and of restricting its consumption absolutely to meals. Some patients find that a little whisky or brandy suits them best, others find a light still moselle preferable, while a few—but in my opinion only a very limited number—find that a light claret agrees best with them. Champagne is a wine which is seldom suited to the gouty, especially if taken daily.

As previously stated, as little complexity as is possible in the meals is the main desideratum in the dietary of the gouty, and in a few intractable cases of chronic gout it may even become necessary to reduce the dietary for a time to the simplest possible condition—namely, to two articles—lean meat and water. There are a few cases of chronic gout which undoubtedly improve and even recover on an exclusive diet of red meat and hot water. These are generally cases of chronic gouty arthritis which have failed to yield to the ordinary methods of treatment and which are accompanied by obstinate derangement of the gastro-intestinal tract, as evidenced by dyspepsia, flatulence, acid eructations, pyrosis, and offensive stools. I have successfully treated a few such carefully selected cases of chronic gout by the employment of this, the so-called "Salisbury" treatment and beneficial results have also been obtained by Mr Armstrong. It is essential before placing a patient on such diet that the urine should be carefully examined, as any advanced condition of kidney disease contra-indicates the employment of such a dietary. If the evidence of kidney derangement is only slight the adoption of the dietary is not contra-indicated, but the urine must be carefully examined every two or three days, as any considerable increase in the albuminuria would at once be an indication for the discontinuance of this special diet. Gouty patients suffering from organic heart disease with any failure of compensation should never be placed on this dietary.

The dietary in cases of rheumatoid arthritis should be as liberal as the digestive organs allow. Any food that the patient knows from his experience agrees with him may be allowed. It is essentially a disease that requires good and nutritious feeding and I have seen many cases of rheumatoid arthritis which have gone thoroughly to the bad through the initial error of mistaking the disease for gout and treating it with a spare diet.

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CONGENITAL DISPLACEMENT OF THE HIP.[1]

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IN reviewing the general treatment of this affection I would offer the following conclusions:—1. That in all cases and at all ages some good may be effected by treatment. 2. If the displaced head of the femur has formed a firm bearing against the pelvis so that no tendency to increase of deformity exists, and the difficulties of walking are slight, then we may devote our energies to counteract lordosis by mechanical support, freeing adverse contractions such as those of the adductors and equalising the length of the legs when only one side is involved. Sometimes when *both* sides are affected there may be inequality in length of legs. 3. If the head of the femur is freely moveable up and down (telescopic) then some measures must be adopted to prevent increase of deformity, and the least that can be done is to recommend recumbency or the use of some apparatus to keep the weight off the affected limb. If such measures are taken we may as well also attempt to improve the position of the head of the femur or entirely reduce the dislocation. Until the age of seven years all congenital dislocations can be reduced. This is Lorenz's dictum and his view seems correct. In single displacements the time limit may be extended to nine years of age. These limits are not absolute, for much older patients may occasionally have their hips replaced.

As to the permanent result of reduction, the exact degree of success depends upon the condition of the joints. If the head of the femur is very deficient in form and the acetabulum very shallow or misshapen the result can hardly be as satisfactory as when the bones and other joint structures are less abnormal. In any case, however, if we keep the bones in place sufficiently long (about two years) we may expect a more or less satisfactory result. This fact is already

[1] A paper delivered before the Fourteenth International Congress of Medicine at Madrid, April 25th, 1903.

proved by the effect of treatment of cases previously published, cases in which several years have elapsed after treatment has been completed without any relapse having occurred. In some of such cases previously noted it is highly probable that complete reduction had not been accomplished, the retention of the head of the femur having been the result of the formation of a false joint; the occurrence of such false joints is well known to surgeons as happening after traumatic unreduced dislocations. The reduction by means of opening the joint with or without efforts to cut a new joint or otherwise interfere with the joint structures with the knife is at the present time not satisfactory, whereas the operation by manual reduction assisted by division of contracted muscles as perfected by Lorenz has been highly successful and is therefore recommended by me.

Treatment by manipulative reduction.—In England, since Dr. Lorenz visited us, questions have frequently arisen as to the treatment of congenital displacement of the hips by his particular method. To do full justice to the subject would necessitate the writing of a treatise or at least a long paper. I have therefore selected the more practical questions which have been put to me and have answered them as concisely as possible. I hope that this may prove useful to those practitioners who are interested in the subject.

PRACTICAL QUESTIONS.

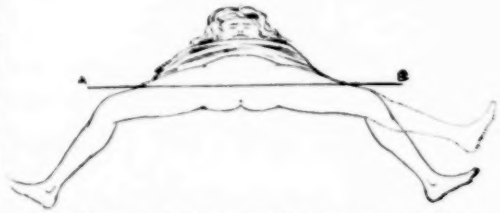
1. *Question:* What is the condition of the joints in congenital displacement of the hips?—*Answer:* The condition varies very much; the bones may be very defective in shape, the head of the femur very small and misshapen, and the acetabulum very shallow. On the other hand, the appearance shown by x-ray photography may be perfect or apparently so. The upper and posterior borders of the socket are very frequently deficient. The capsule is enlarged and there is often a condition of hour-glass contraction and the upper ridge of the cotyloid cartilage may be bent down into the acetabulum. The ligamentum teres may be attenuated or absent. It is not my purpose to discuss these points at greater length upon this occasion because our evidence upon the subject is yet far from complete. Moreover, it is quite possible that whatever the exact condition of the joint reduction of the displacement will have a good effect. Even if the head of the femur fails to pass through the contracted neck of the capsule, or is in other ways prevented from assuming absolute contact with the acetabulum, yet the pressure of the head of the bone directly inwards will in all probability lead to absorption of such intervening tissues and to the formation of an adventitious cavity.

2. *Question:* Can the head of the thigh bone be brought into the acetabulum or into contact with the flat surface that represents that socket in some cases without an operation which involves opening the joint?—*Answer:* When both hips are affected this can, without doubt, be done up to the age of seven years. When only one hip is affected the reduction can be accomplished with practical certainty up to the age of nine years. Reduction may, however, be effected in much older children and even in adults (Lorenz). It is generally necessary to prepare these older patients by preliminary exercises. In my own cases I have succeeded with one patient aged 11½ and another aged 12 years without preparation and in one case aged 18 years after a year's previous treatment.

3. *Question:* What evidence have we that the head of the femur is really placed in its proper position at the time of the operation?—*Answer:* (1) The head of the femur is felt and often heard to slip over an edge and settle in a new position; (2) the hollow in the groin which has previously existed is filled up and in unilateral cases becomes equal to the sound side; (3) the thigh is distinctly lengthened, measured from the centre of the body to the knee; and (4) so long as the joint is "out" the leg may be extended in a straight line with the thigh (Fig. 1, dotted line), the limb being at right angles with the patient's body (Fig. 2), but directly the head of the femur is in place the full extension cannot be made, as by the lengthening of the limb the hamstrings become too tight to allow of full extension. In operating these symptoms may be made more apparent by displacing the joint and again reducing it several times.

4. *Question:* After reduction what position is necessary to maintain the joint surfaces together?—*Answer:* The limb must be kept at right angles to the body (Fig. 2) and the knee pressed backwards until it is posterior to the centre of the body (Fig. 1). The knees will be seen below the level of the line A B. This position brings the head of the femur forward into its capsule. In the majority of cases the socket is deficient above and posteriorly, so that if the limb is not

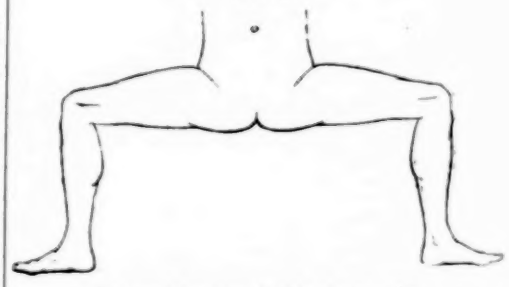
FIG. 1.



Extremely abducted position of limbs after operation, the knees being below the transverse median line A B.

kept at right angles to the body (Fig. 2) the head of the femur will tend to slip upwards, and if the limb is not abducted backwards (as shown in Fig. 1) the femoral head will tend to slip backwards.

FIG. 2.



Right-angled position of thighs after operation.

5. *Question:* How long must this position be maintained before it is safe to alter it?—*Answer:* Six months.

6. *Question:* What must be done subsequently?—*Answer:* The limb must be gradually brought down to an increased angle with the body (Fig. 3). This process takes about a

FIG. 3.

Showing gradual straightening of the limb.

year and the child is able to get about during that period. At the end of two years in the majority of cases the joint will be found strong and completely serviceable.

7. *Question:* Can we rely upon the result being always absolutely perfect?—*Answer:* The result depends to some extent upon the condition of the joints. We obviously expect the best results in those cases in which the bones are least defective in shape.

8. *Question:* What may we expect in the least favourable

cases when the acetabulum is so rudimentary that it gives in itself no retaining support to the head of the femur?—*Answer:* The result will probably be fairly good because the head of the femur will have made an artificial socket for itself by long-continued pressure in one position, and its retention in the socket will be assisted by the shortening of the muscles about the joint.

9. *Question:* What evidence have we to support this statement?—*Answer:* (1) We have the evidence of some continental surgeons who have seen such cases throughout the treatment. (2) We have the evidence of dissection of cases in which the patients have subsequently died from some independent affection.[2] (3) We have the evidence of a good result following retention of the head of the femur at the normal level for two years[3] although the reduction has not probably been complete. In the case referred to in the *British Medical Journal* three years after getting about there was less than half an inch shortening, although previously there had been two inches. If we get so good a result when the head of the femur has been only brought to the level of the acetabulum we may expect an equally good or better result when the joint surfaces have been kept in exact contact. (4) We have the evidence of pathological specimens showing that a very good acetabulum may be formed when a hip joint has been dislocated traumatically and has remained unreduced for a long time. As an example of such a newly formed joint I give Fig. 4.

FIG. 4.

Reduced copy of a figure (Plate III.) in Sir Astley Cooper's "Dislocations and Fractures of the Joints," published in 1826. It represents "a dislocation into the foramen ovale which had never been reduced"; the new socket (c) had been formed, allowing "a considerable degree of motion." This new socket held the head of the femur firmly. "It was lined by a ligamentous substance." Museum, St. Thomas's Hospital.

10. *Question:* What can we promise in any case as to the results?—*Answer:* We can promise that in any circumstances the patient will be benefited; that is, will be better off than if no treatment had been carried out; that many will be absolutely cured and others greatly relieved.

11. *Question:* Is the so-called "bloodless" method of rupturing the contracted adductors, as advocated by Lorenz, satisfactory?—*Answer:* In children up to the ages of four, five, or perhaps six years a very moderate amount of firm pressure and massage of the adductors, held tense, will rupture their fibres, and although a certain amount of extravasation of blood will take place beneath the skin and around the site of the rupture the effect is satisfactory; and as some parents attach great importance to the avoidance of the use of the knife this procedure admirably serves our purpose. In older patients, or in any patient whose muscles are very firm, the section of the contracted parts with the knife is better.

12. *Question:* What are the comparative effects of the two methods of operation on the adductors, rupturing and cutting the fibres?—*Answer:* The rupture of the adductors, which is effected by chopping and pressing with a sawing motion with the side of the hand (Lorenz's method), is effectual in overcoming the contraction, but besides causing extravasation of blood it often leads to abrasion of the skin. To be strictly accurate, it is, of course, not really "bloodless" when the surface of the skin bleeds; and in the case of older patients, where the adductors are very firm, the abrasion may be severe. Division of the right muscles through an open wound is a very safe and satisfactory procedure, but it is necessary to protect the wound with a sterilised dressing during the subsequent manipulations required in the reduction of the displacement. I have found a combination of the two methods of operation satisfactory and effective. When the adductors are put upon the stretch in the position of right-angled abduction they are drawn away from the deep tissues and stand out as a well-defined body of muscle. Subcutaneous section of this prominent mass of muscle can be accomplished easily and safely, and if any deep fibres remain they can be broken down by abducting the thigh further. Thus we get rid of the contraction with very little extravasation of blood, with a clean-cut muscle, and with only a minute wound.

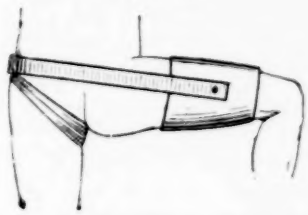
13. *Question:* What method should be adopted to retain the bones in their new and correct position?—*Answer:* A plaster-of-Paris casing has chiefly been used for this purpose and if thoroughly well applied, as done by Dr. Müller for Dr. Lorenz, it serves its purpose very well. However, it possesses some disadvantages. It involves keeping the patient under the anæsthetic for nearly an hour after the replacement has been effected, and if it should happen from any cause that a readjustment is necessary the removal of the plaster and its re-application are unavoidable. This is a tedious operation sometimes involving a second recourse to an anæsthetic. I have devised several forms of apparatus to take the place of the plaster-of-Paris and my most recent splint seems likely to prove satisfactory. It consists of a single iron splint A B (Fig. 5), to which is riveted a trough of iron, C. This iron is rigid enough to maintain its form

FIG. 5.

Splint for single displacement.

but soft enough to be bent as required by the surgeon. The trough is bent to fit half the circumference of the thigh, and the opposite side of the splint (B) is bent round the crest of the ilium (Fig. 6). Of course, the splint is

FIG. 6.



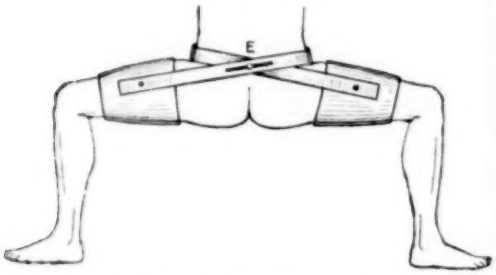
Splint for single displacement; back view.

very thickly padded before it is applied. The thigh is then bandaged to the trough and the end (B), which encircles the opposite side in the region of the crest of the ilium, is also attached by flannel bandages. An opening in the iron band (D) enables the surgeon to fix his bandage firmly at this end. A perineal band on the sound side and a few turns of bandage round the waist suffice to keep the splint in position. This describes the splint for a single displacement. If the case is double a second splint is necessary for the other side (Fig. 7). In putting on the second splint it will require bending a little where it passes over the first at E. If a slot is made in each splint where they cross one another the two can be fixed together with a nut and screw. These splints are not only advantageous for the reasons

[2] Therapeutic Gazette, Feb. 15th, 1903.
[3] Brit. Med. Jour., Nov. 6th, 1897.

already given, but they cost less than plaster-of-Paris bandages. Whether plaster-of-Paris or iron splints be used it is a very good plan to put a pair of soft drawers on the child first; these can be cut down the middle between the legs. When the bandages are used (about 20 are necessary) a very thick layer of wool should be applied over the drawers, kept in place by a plain bandage before the plaster ones are

FIG. 7.



Splints for double displacement.

put on. If the iron splints are used the padding on the splints takes the place of the layer of wool referred to. The iron should be painted with velvril paint, which dries so rapidly that it can be used shortly before the splints are required. This paint is said to prevent rusting.

14. *Question:* Does the patient suffer much from this treatment?—*Answer:* Not more than from many operations. There has been a good deal of restlessness during the first night in nearly all the cases I have seen operated on or have operated on myself. The temperature has risen to about 100° F. and gradually subsided, reaching normal after four or five days or a week. The children have been quite comfortable and happy at the end of about three days. The peculiar position of the legs seems to give no trouble after the first or the second day. After about three weeks in bed the patients can get about on a stool with castors and, for a change in resting, I have devised a prone couch with a seat in the middle. If one leg only has been affected they manage to walk about with the help of a crutch extension from the thigh.

Queen Anne-street, W.

ON A CASE OF TOXÆMIA OF OBSCURE ORIGIN.

BY LEONARD WILLIAMS, M.D. GLASG., M.R.C.P. LOND.,
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THE lack of definite knowledge on the subject of toxic blood states and the obscurity of the origin of most of them are my excuse for recording a case presenting some very unusual features. Failures are proverbially more instructive than successes and the failure to make a correct diagnosis in this case may not be without its lessons for those who, like myself, regard the domain of pyæmia or septicæmia as a territory singularly in need of study and exploration.

On July 10th, 1902, a young woman, aged 22 years, came to consult me on account of some dyspeptic symptoms attended by a slight facial eruption. She had just come from the tropics, where a considerable portion of her life had been spent. The dyspepsia, which was accompanied by some anæmia, rapidly yielded to treatment and she went away from town for the summer. In the second week in September she returned to town to make preparations for a social function which was to take place on Oct. 1st. On Sept. 21st I saw her mother who told me that the patient had had an attack on the previous day which had alarmed them very much and which from the description I took to be a rigor. I accordingly arranged to call at their house on the following day and to examine the patient in bed. The examination revealed the existence of a very marked lateral curvature with convexity towards the right which had been treated for some years with a measure of success. There was no pain or tenderness along the spine and the curvature seemed to offer no explanation of the supposed rigor. There was no tuberculosis in the family. The lungs were sound, the area of the heart was normal, and there were no bruits. The urine was free from albumin and sugar. The only other fact of importance which very careful examination of the patient could elicit was the existence of what appeared to be an ill-defined and somewhat tender mass in the region of the gall-bladder. The abdominal walls were thick and the nature of this mass was not at all easy to conjecture. It moved with respiration and with firm pressure seemed to disappear under the ribs backwards. The possibilities which presented themselves were enlarged gall-bladder and enlarged and unduly moveable kidney, though I am bound to say that neither of these appeared probable, nor did the possible existence of either serve to throw any light whatever on the supposed rigor. I left, requesting that if another attack should occur I might be apprised by telephone.

Two days later—i.e., on Sept. 24th—I had an opportunity of witnessing an attack which, I was informed, was exactly similar to the first. The patient was shivering so violently that the bedstead shook and her teeth chattered so incessantly that it was almost impossible for her to reply to my questions. There was, however, no complaint of pain and the mind was clear and even active. The pulse, full and bounding, numbered 110; the temperature, taken twice, was 102° F., and the skin was dry and burning. On placing my hand over the suspected region and making pressure backwards to ascertain if there was anything more definite than on the occasion of my first examination, to my great astonishment the shivering suddenly ceased. Half an hour later the temperature was still 102° but the pulse had fallen to 95. Three hours later the pulse and temperature were normal, the patient expressed herself as quite well, and wanted to get up.

The sudden cessation of the rigor on abdominal pressure, together with the emotional factor supplied by the approaching social function gave rise to a suspicion in my mind that there might be a functional element in these ebullitions, and although I found it very difficult to reconcile this suspicion with the general bearing and attitude of the patient I decided to include some potassium bromide in the mixture of quinine and arsenic which I prescribed.

From this day (Sept. 24th) to Oct. 9th—a period which included the social function with its attendant excitement and fatigue—the patient remained in excellent health and spirits. On the 10th, however, there was an unmistakeable rigor; another occurred on the 11th and yet another on the 12th. All these I saw and seemingly stopped by making pressure in the right hypochondrium. In all three the temperature was raised to over 101°, the skin was dry, and the pulse was rapid, much as on the first occasion. There were no sweats. The question of malaria had been carefully considered after the first attack and there seemed to be no reason whatever for supposing that such a cause was at work. The increasing number of the attacks, which certainly did not lessen in severity, and the obscurity of the whole condition, made me anxious to clear up the question of the possible existence of a functional element. There was more than a little to be urged in favour of such a view and yet the whole aspect of the case seemed totally opposed to it. I therefore asked Dr. J. S. Risien Russell to see the patient with me. He examined very carefully not only her nervous but also her other systems and although he was unable to suggest a diagnosis he was quite positive that such evidences of a functional element as may have existed were the results of the obviously grave pathological state.

On the following day (Oct. 13th) Mr. W. Arbuthnot Lane saw the patient with me. He confirmed my observation of the existence of a somewhat tender mass in the right hypochondrium the nature of which was not clear. On account of the thickness of the abdominal walls and the difficulty of getting them relaxed, it was arranged that the patient should be anæsthetised on the following day with a view of defining, if possible, the nature of this mass. When we met to make this examination on the morning of the 14th we found that the patient had just had a rigor. Her temperature was 105°, the pulse was rapid, and for the first time since the attacks began the tongue was foul. As she was obviously too ill to narcotise then, it was arranged that as soon as it was practicable she should be taken to a nursing home with a view

of losing no time in operating if an operation were deemed desirable. The removal took place in the course of the morning and at 4 P.M. we met at the nursing home. The patient was more comfortable than she had been in the morning and her temperature had fallen to 100·2°, but she still seemed very ill, so much so, indeed, that Mr. G. Rowell was very loth to anæsthetise her. The result of the examination, though it confirmed the existence of the mass which had already been determined, was otherwise negative. The question of a subphrenic abscess was discussed, a possibility which had seemed to me to become more and more of a probability during the preceding few days, and it was decided that the abdomen should be opened.

Mr. Lane performed the operation in the usual manner and explored the whole abdomen carefully. There was no abnormality of any kind to be discovered except a mass of intestines matted together just below the liver and after a second exploration with special reference to the subphrenic region had proved negative, the wound was closed. On the next morning at 10 o'clock the temperature was normal; the same evening at 10 o'clock it was 99·8°. On the following day, the 16th, the temperature was: morning, 102·6°; evening, 101·2°. On the 17th it was: morning, 102°; evening, 104·6°. Up to this point the pulse had been fluctuating between 96 and 112 and the respirations between 24 and 28. On this day, however, the pulse at 10 A.M. was 128 and at 6 P.M. it reached 138, while the respirations rose between these hours from 28 to 38 and a slight cough developed. On the 18th Mr. Lane examined the wound which he declared to be in a perfectly satisfactory condition. The temperature in the morning was 104·8° and the evening it was 104·2°. The respirations remained at 38 and the pulse rose to 148. The cough now became more troublesome and although it was very difficult to auscultate the patient I thought that I made out some pleural friction sounds on the right side. On this day a pronounced urticaria declared itself, which yielded to treatment in a few days. On the 19th the temperature was 104·2° in the morning and 103° in the evening. The respirations were 32 and the pulse was 140. On the 20th the patient was seen by Sir Richard Douglas Powell in consultation with Mr. Lane and myself and on the bandages being removed for his examination of the case it became at once apparent that the wound was no longer pure. There was a deep blush at its lower end from which Mr. Lane evacuated some pus. There were, however, no signs of general peritonitis. Sir Richard Douglas Powell decided that the chest condition was undoubtedly a pleurisy, so far as he was able to examine the patient, but referred to the possibility of there being a pneumonia at the right base behind, a point which could not possibly be determined in the then state of matters. With regard to the general condition underlying these manifestation he expressed his belief that the surgical wound had suppurated owing to the blood state of the patient, the latter being septic probably owing to defective sanitation of the house from which she had come. He further expressed grave anxiety as to the prospect of the patient's recovery. It would, indeed, be difficult to imagine anything more alarming than the features of the case as they then presented themselves. Matters, nevertheless, began to mend rapidly. In 48 hours the temperature had fallen to 101°, and except for one wholly inexplicable excursion to 105° on the 23rd it continued to fall regularly until on the 27th it had reached normal. The pulse and respirations both displayed a similar tendency and on the above-mentioned date were recorded respectively as 92 and 24. Sir Richard Douglas Powell saw the patient on two subsequent occasions, on both of which he was satisfied that the physical signs in the chest were due to serous and not purulent fluid. This estimate was confirmed when on Nov. 5th the side was punctured and a clear fluid withdrawn, which was sent to Dr. J. W. H. Eyre of Guy's Hospital for examination. As will be seen from the appended report no effort was spared to obtain such light upon the case as the fluid might be able to afford, but unfortunately none was forthcoming.

Microscopical examination of the centrifugalised deposit from this specimen by means of cover-slip film preparations, suitably stained, failed to demonstrate the presence of pneumococci, streptococci, influenza bacilli, or tubercle bacilli.

Cultivations prepared from the deposit upon various nutrient media, including agar, blood agar, and broth, and incubated at the body temperature for several days (four days) remained completely sterile.

Inoculation experiment.—A guinea pig, weighing 270 grammes, was inoculated with the remainder of the deposit, suspended in 1·5 cubic centimetres of sterile broth, into the peritoneal cavity. At the end of a period of observation, extending over one month, the animal had gained 100 grammes in weight and failed to react when injected with tuberculin. It was, therefore, killed and at the post-mortem examination no lesions such as would be caused by tuberculous infection could be detected.

The result of these experiments, therefore, leads to the conclusion that the pleuritic effusion was not the immediate and direct result of bacterial infection.

The subsequent history of the case was uneventful. Mr. Lane, not being satisfied with the behaviour of the wound, deemed it advisable to remove the deep stitches and when this was done the patient made an uninterrupted and fairly rapid recovery.

It is not easy to suggest any explanation of the facts of this case which is not open to some objection. The view, however, which seems to have most in its favour is as follows: The rigors indicated the presence of a profound general toxæmia regarding the origin and true nature of which I have no suggestions to offer. It may have been, as suggested by Sir Richard Douglas Powell, due to defective sanitation, but I was unable to procure any evidence to show that it was. It was certainly not malarial, and I did not succeed in determining the presence of any other recognised cause which appeared at all probable. To anyone seeing the patient on the day of the operation it was all too evident that if the disease were allowed to continue unchecked she would quite certainly succumb in a few days. The operation, though it failed to discover any focus of disease in the abdomen, was nevertheless conspicuously successful in a most unlooked-for direction. This was in providing a definite *locus minoris resistentiæ* on which the toxæmic forces could concentrate, thus converting a general toxæmia threatening the life of the patient by way of the nervous system into one which was local and therefore comparatively harmless. To use the language of our grandfathers, it is as if the poison in the blood had been "issued" by a seton on a large scale. Could this effect have been foreseen the abdomen would certainly not have been selected as the site of the seton, but having regard to the very intractable nature of the many obscure blood states which are grouped under the name "pyæmia," it might be well to consider this method of procedure in sites less open to objection where, as in this case, the ordinary medicinal treatment is unsuccessful. It is, of course, open to anyone to say that the wound became foul from lack of antiseptic precautions, but even if this were so it would not in any way explain the disappearance of the alarming symptoms as the result of the operation or the fact that the patient made a steady recovery as soon as free drainage was provided. Moreover, wounds made by competent surgeons in circumstances permitting of due precautions do not nowadays suppurate from lack of such precautions, and the operator in this case—Mr. Arbuthnot Lane—is, to say the least, as little likely to neglect such precautions as any other surgeon of his standing. The occurrence of the urticaria, though susceptible of at least one other explanation, is quite in accord with the view which is expressed above, if we suppose that the toxins were leaving the deeper structures in order to concentrate on the wound in the skin, to which, it may be added, their attentions were subsequently confined. Urticaria is, of course, a condition which is by no means uncommon in toxic states.[1] The onset of the pleurisy coincidently with the formation of pus in the wound and the sterile nature of the fluid subsequently effused are factors for which I am quite unable to account. It is difficult, indeed, to believe that the mere fact of the operation—the mechanical interference, that is—should have caused inflammation in the pleura while leaving the peritoneum unaffected; and yet, if the pleural inflammation was due to a septic process, it is impossible to understand how the resulting fluid could behave in the laboratory as this was shown to do. There does not seem to be any hypothesis about the case which will either elucidate this point or bring the occurrence of the pleurisy into line with the other facts. The probabilities remain, then, in favour of the "seton" theory, and although I deprecate as strongly as anyone that lust for operation which is said to beset some members both of the profession and of the public I feel that this theory and the practice which would be its logical outcome are worthy of some attention at the hands of those who may have similar cases to deal with.

York-street, W.

[1] Radcliffe Crocker: THE LANCET, March 7th, 1903, p. 640.

A CASE OF TUBERCULOUS PERITONITIS; SPONTANEOUS RECOVERY.

BY HENRY F. BELLAMY, M.D.,
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SPONTANEOUS recovery in cases of advanced abdominal tuberculosis is unhappily a somewhat rare event, so that it seems desirable, not only from a clinical but also from a statistical standpoint, that due record should be made of its occurrence.

In April, 1901, a child, aged eight years, was brought to me with a history of rapidly progressive debility and wasting extending over a period of six months; for more than a fortnight also there had been constant complaint of pain in the region of the umbilicus. With the exception of this pain the child was fairly comfortable during the daytime, but towards evening she developed fever and sweating which gave rise to disturbed or sleepless nights. The family history was significant: two of the mother's sisters and a brother had died from rapid pulmonary tuberculosis and the mother herself was of a pronounced tuberculous type. At the time of my first examination of the child, which took place in the morning, she appeared to be bright and cheerful enough, although she was extremely thin; the eyes had an unnatural brilliancy and there was a hectic spot on both cheeks. Examination of the lungs gave no physical sign of serious lung mischief, although there were deficient expansion and a moderate dry cough. The abdomen was swollen and tense and the superficial veins were well marked, symptoms which, together with the pain, had been the cause of advice being sought. Percussion of the abdomen yielded a tympanitic note everywhere but in the flanks quite posteriorly, where a dull note was elicited; here also I was almost certain that I could detect a fluid thrill. The liver was not enlarged and nothing otherwise abnormal in the abdomen could be detected on palpation. The temperature was two-fifths of a degree below normal and the pulse-rate was 100. I advised that the child should be put to bed pending a visit from me on the same evening. At this visit a grave clinical picture presented itself; the child, with brilliant eyes and pink flush, tossed restlessly in bed; there was a considerable amount of perspiration, the temperature was 103·3° F., and the pulse was 120. The mother informed me that this had been, more or less, the usual evening condition of the child for the past month and that it was becoming steadily worse. The abdomen was still tumid and the child complained of pain on the slightest movement. There was also, I remember, a vague pain in the left shoulder. No appreciable alteration in the area of dulness in the flanks could be obtained by changing the position of the child, but I convinced myself of the fluid thrill. It was now tolerably plain that the child's ailment was of a tuberculous nature and rapidly progressive in type. I gave the mother a guarded prognosis and ordered the usual anti-tuberculous measures, laying especial stress on rest in the recumbent position, fresh air, sunshine, and careful feeding. Two days later, on my visit, I discovered a yellow discolouration of the skin in the neighbourhood of the umbilicus. This I supposed to be a cutaneous pigmentation described as occurring in cases of abdominal and other forms of tuberculosis. On the following day, however, there were considerable digestive disturbance, light-coloured fæces, and rather high-coloured urine. The pigmentation had now deepened and extended to the rest of the body and was well marked on the conjunctivæ. During the ensuing four days the urine became darker and darker and finally it resembled port wine. The skin was irritable; in fact, the patient displayed every symptom of acute icterus. I ordered mercury with chalk in half-grain doses three times daily, together with a saline aperient mixture. Since no improvement took place in spite of this and other anti-icteric treatment I came to the conclusion that the jaundice was not catarrhal but obstructive, probably due to pressure on the bile-duct by an enlarged mesenteric gland. The most difficult and trying feature in the case at this time lay in the nourishment of the patient. Her appetite, according to the mother's statement, had always been capricious and variable, but now it quite baffled all attempts at rational alimentation. Cod-liver oil and its preparations and the various forms of malt extracts and chemical foods were tried in turn but were absolutely refused, or when forced upon the child made her sick. With great difficulty she was prevailed upon to take milk and milk puddings thickened with Roborat, a preparation of vegetable albumin which I have seen largely used in German sanatoriums. This was, fortunately, well retained and proved a veritable "sheet anchor." By the middle of June the child was getting no worse and had ceased to lose flesh. The jaundice, although still present, was much less in amount and finally disappeared about three weeks later. At the end of the latter period also the evening temperature never exceeded 100·5° and seldom attained even that height. The patient, who had hitherto occupied a large, airy room facing south, with the window wide open day and night, was now taken downstairs in blankets into the garden and placed, reclining at full length on pillows, in a sheltered corner. The weather was fortunately fine and the change was found to be beneficial both for mind and body. There was now no cough and the breathing had improved. The appetite had steadily improved and with it the body-weight. Soups and meat essences thickened with Roborat were readily taken and digested. Progress continued steadily until the middle of September, when the patient was allowed to sit up and to move her arms freely. The evening temperature had sunk to 99°. Winter was now approaching and I was much exercised in my mind as to how it was to be faced. Fortunately, the opportunity of a voyage to Australia under extremely comfortable circumstances presented itself and I readily gave my consent to its being undertaken. The little patient was carefully transported to a Mediterranean port and thence on board the vessel. No remissions occurred during the voyage and after an absence of eight months she returned in good health and able to follow the usual pursuits of children of her age.

I think the case is interesting as showing that recovery is *possible* in these cases when the best conditions of life are obtainable and when the patient has not already become too much exhausted by the disease. In this instance the potent factors in bringing the case to its successful termination appear to have been fresh air and careful dieting.

Abbots Langley.

THE RELATION BETWEEN ACETONURIA AND ACIDÆMIA IN CASES OF GASTRIC ULCER.

BY F. GOLLA, B.A. OXON.
(*From the St. George's Hospital Physiological Laboratory.*)

IT has long been known that pathological conditions of the alimentary tract bringing about a state of partial inanition are accompanied by excretion of the acetone group of bodies. Czerny[1] and his pupils, in a series of observations on cases of gastro-enteritis in infants, estimated the excretion of β-oxybutyric and diacetic acid by determinations of the ammonia in the urine. In many cases they found as much as 50 per cent. of the total nitrogen excreted as ammonia. Van Noorden[2] observed acetonuria in cases of typhus fever and dysentery. Magnus Levy[3] found that in the acetonuria accompanying cases of gastro-enteritis and chronic duodenal catarrh the nitrogen excreted as ammonia varied from 4 to 17 per cent. of the total nitrogen. Külz obtained similar results in cases of cancer. It may be regarded as beyond doubt that the acetonuria in all such cases arises from metabolic disturbances due to inanition. Gerhardt and Schlesinger[4] obtained 9 grammes of β-oxybutyric acid from 1·5 litres of urine in the case of a non-diabetic man fed exclusively on meat and fat and a certain amount of acetonuria was recorded in all the observations made by physiologists on fasting men.

That the acetone bodies are formed from fat metabolism and not from proteids as Urmtrand originally taught, was first shown by Geelmuyden,[5] and the same was found to be

[1] Czerny: Jahrbuch für Kinderheilkunde, Bände xliv., xlv., xlvii., and xlviii.

[2] Van Noorden: Pathologie des Stoffwechsels.

[3] Magnus Levy: Archiv für Experimentelle Pathologie, Band xlv.

[4] Gerhardt and Schlesinger: Archiv für Experimentelle Pathologie und Pharmacologie, Band xlii.

[5] Geelmuyden: Zeitschrift für Physiologische Chemie, Band xxiii., 1897.

true for diabetics by Schwarz. Magnus Levy [6] proved that in some of his cases the amount of nitrogen excreted could not possibly account for all the acetone bodies found in the urine had they arisen as products of proteid metabolism. Schwarz [7] was able to increase the acetonuria of diabetics and fasting subjects by giving large amounts of butter; he considered that the butyric acid was changed in the organism into β-oxybutyric acid and that from this, according to the well-known theory of Minkowski, diacetic acid and acetone were formed. Hagenberg [8] confirmed these results by experiments on himself. Acetonuria seems to bear a special relation to the upset of metabolic equilibrium resulting from a deprivation of carbohydrate material. Urmtrand found that carbohydrates had no influence on the oxidation of acetone bodies ingested by the organism but that in non-diabetics the acetonuria could be diminished by giving carbohydrates. A sufficiently accurate index of the amount of pathological acid excreted can be obtained by the simple method which I have made use of in determining the ammonia in the urine passed in the 24 hours. Of course, for purposes of greater accuracy an estimation of the total basis excess would be necessary. No attempt was made to estimate the acetone excreted by the breath; this forms, however, an appreciable amount. It has been found by various observers to amount to 0·005 gramme per hour in a normal man and during pronounced acetonuria may rise to 0·8 gramme per diem.

The present series of observations were made on a number of patients under the care of Dr. Rolleston, all of whom were being treated for gastric ulcer by more or less prolonged periods of rectal feeding, nothing at all being given by the mouth. In all such cases the acetonuria as measured by the excretion of ammonia is far in excess of that recorded in cases of gastro-enteritis and gastric ulcer by Magnus Levy. This is no doubt accounted for by the fact that except for the very dubious sustenance afforded by rectal injections of albumin water they were in a state of complete inanition. The relation between fat metabolism and acetonuria was most strikingly demonstrated by the relation of the excretion of ammonia to the obesity of the patient. The majority of the patients were fat, pulpy-looking servant girls of the anæmic type that is constantly associated with gastric ulcer. The patients in Cases 5, 7, and 9 were markedly thin and emaciated by a long spell of anorexia and in these the amount of ammonia excreted was very small. It would appear as if in the early stages of inanition the metabolism runs riot at the expense of the surplus fat

No. of case.	Day of rectal feeding.	Total nitrogen in grammes.	Nitrogen excreted as ammonia in grammes.	Diacetic reaction.
1	Woman, fourth day of rectal feeding.	12·85	5·5	+
2	Woman, fifth day ,, ,,	13·9	8·5	+ +
3	Boy, second day ,, ,,	14·0	6·0	+
4	Woman, eighth day ,, ,,	12·5	7·0	+ +
5	Man, fourth day ,, ,,	11·4	2·85	Moderate.
6	Woman, eighth day ,, ,,	9·1	4·2	+
7	Woman, seventh day ,, ,,	12·0	3·0	+
8	Man, third day ,, ,,	—	6·0	+ +
9	Man, third day ,, ,,	14·0	2·9	+
10	Woman, seventh day ,, ,,	—	8·1	+ +
11	Woman, fifth day ,, ,,	—	5·0	+

It will be seen that in several of these cases, notably 2, 4, and 10, the ammonia excretion shows a degree of acetonuria quite as great as that which has been found in diabetic coma. Naunyn states that the amount of ammonia excreted in diabetics rarely exceeds 7 grammes in the 24 hours and the observation of Stadelmann of a case excreting 11 grammes is unique. In view of these facts it becomes of some importance to inquire into the influence of the formation of acetone on the alkalinity of the blood in non-diabetics. The clinical evidence in cases of œsophageal obstruction where death has occurred from inanition gives no support to the possibility of an identity between death from inanition and death from the supposed acidæmia of diabetic coma. A direct determination of the alkalinity of the blood by some method such as that of Lowry would give information as to the combination of an acid with the carbonates of the blood and with the proteid bodies of the blood. An estimation of the CO_2 of the blood only gives us information on the first point. I have only investigated the CO_2 content of the venous blood which should according to the theory of acid intoxication in diabetic coma of course be markedly decreased. The only previous investigation on diabetic blood appears to be that of Minkowski [9] who found in one case with commencing coma 15 per cent. CO_2 in the arterial blood as against a normal of 40 per cent., and in another case with fully developed coma only 3 per cent. CO_2. The following results were obtained from blood withdrawn by means of a hypodermic syringe from the basilic vein: Case 7, 33 per cent. CO_2; Case 9, 30 per cent. CO_2; Case 11, 39 per cent. CO_2; Case 8, 39 per cent. CO_2; and Case 10, 37 per cent. CO_2. In all these cases the volume of CO_2 obtained tallied with the results obtained from normal persons where the arm had not been engaged in any particularly strenuous exercise and it would therefore appear demonstrated that even with a very marked acetonuria the alkalinity of the blood is by no means impaired.

I have some hesitation in applying these results to the question of diabetic coma. Dr. Rolleston, to whose kindness I am indebted for the opportunity of making all the foregoing experiments, obtained permission for me to take a sample of venous blood from a diabetic with very pronounced acetonuria. The sample gave a CO_2 determination of 38 volumes per cent. In another case with only slight acetonuria under the care of Dr. Ewart the venous blood gave 29 volumes per cent. of CO_2. It is difficult in face of the results obtained from the acetonuria of inanition not to entertain some doubt as to the true value of the acidæmia theory of diabetic coma. I have, however, as yet had no opportunity of estimating the CO_2 in the blood from a diabetic in a state of coma. The view put forward by Sternberg [10] that diabetic coma is due to the toxic β-amido-butyric acid, which he considers to be a forerunner of β-oxybutyric acid, merits more attention than it has received; death under such conditions would result from toxæmia rather than from acidæmia and such a view would equally well explain the beneficial results obtained from large injections of a sodium salt.

St. George's Hospital.

[6] Op. cit.

[7] Schwarz: Centralblatt für Stoffwechsel und Verdauung, Band I., No. 1.

[8] Hagenberg: Ibid., No. 2.

[9] Minkowski: Mittheilungen aus der Medicinischen Klinik zur Königsberg, 1888.

[10] Sternberg: Zeitschrift für Klinische Medicin, Band xxxviii.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. v., Proœmium.

WESTMINSTER HOSPITAL.

A CASE OF MALIGNANT DISEASE OF THE LIVER SECONDARY TO LYMPHO-SARCOMA OF THE THYMUS.

(Under the care of Dr. W. MURRELL.)

A MAN, aged 53 years, was admitted into the Westminster Hospital on Dec. 30th, 1902, stating that five or six weeks previously he had noticed a swelling under the ribs on the right side for which he thought it desirable to obtain advice. There had been a gradual loss of strength and energy and he was two stones lighter than he had been 18 months previously. He had had no previous illness and he had never been abroad. There was no family history of any hereditary disease. On admission into the hospital the liver was found to be enlarged, extending well down below the level of the umbilicus. The margin was smooth and the surface was roughish but no definite nodules could be detected. There were no jaundice and no ascites. Malignant disease of the

liver was diagnosed but whether primary or secondary it was difficult to say. The rectum was examined but no growth was found and there was no enlargement of the prostate. The stomach was not dilated and there was no thickening of the pylorus. There was no diarrhœa and nothing pointed to the intestines being involved. The primary growth was clearly in none of these situations. There were no cough and no expectoration, but the right lung was higher pitched than the left and the breathing was rough in the infra-clavicular region. Soon after admission the spleen was found to be enlarged and an examination of the blood showed erythrocytes 6,300,000 per cubic millimetre, leucocytes 12,000, finely granular oxyphiles 68 per cent., coarsely granular 8 per cent., lymphocytes 10 per cent., and hyaline cells 14 per cent., the hæmoglobin value being 78 per cent. Later a mass of enlarged glands appeared in the left supra-clavicular region. The patient was not cachectic in appearance and whilst in the hospital did not lose weight. His temperature was usually normal and never rose above 100·6° F. He was given a course of iodide of potassium with inunction of calomel ointment, but without any improvement in his condition.

On Jan. 23rd, 1903, Mr. Walter G. Spencer performed an exploratory laparotomy. The incision was made through the fibres of the right rectus abdominis over the edge of the liver. Nodular growths were seen and felt on the surface of the liver and there were thickening and induration on the under surface. The gall-bladder was apparently not affected. No primary growth could be detected. On the day following the operation the temperature rose to 103°, the pulse being 116 and the respirations 24. A few days later the wound suppurated, there was much distension of the abdomen with high temperature, and the patient died on Jan. 28th.

Necropsy.—At the post-mortem examination, which was performed by Dr. H. E. Hewitt, there was found to be general suppurative peritonitis with many adhesions, much deposit of fibrin, and great quantities of pus, especially in the pelvis. The liver weighed 7 pounds 14 ounces and the right lobe was infiltrated with a growth in parts firm and white and in parts soft and hæmorrhagic. Many outlying nodules were seen; two, of the size of hens' eggs, were soft and extremely hæmorrhagic, the others being swollen, firm, and white. There were many small nodules of both varieties. The stomach and intestines were normal save for the peritonitis. The gall-bladder was normal, as were the bile-ducts, pancreas, and spleen. A large mass of infiltrated glands lay in the portal fissure and covered the head of the pancreas. The growth here too presented the two different appearances. The adrenals were normal but pale and soft. The bladder and testicles were normal. In the thorax there were adhesions at the apices of the lungs and over the right middle lobe the pleura was studded with medium-sized nodules. Nodules as large as filberts were seen in the lung, all of the firm white variety. The heart and pericardium, which were normal, were not removed from the structures of the superior mediastinum, which were densely matted together by a large hard growth presenting the double characters described and firmly adherent to the sternum, the mass extending from the supra-sternal notch down to the level of the base of the heart. The appearances observed were consistent with the disease having started at the situation of the thymus.

Histological report by Dr. W. S. LAZARUS-BARLOW.—The upper part of the thorax was occupied by a mass somewhat larger than the clenched fist and firmly adherent to the sternum. This mass extended from the supra-sternal notch in a fairly mesial position to the base of the heart, being in the latter situation intimately bound up with the parietal layer of the pericardial sac. It was limited with fair sharpness in all directions but particularly on both sides, above, and below. It was hard to the touch but on section it was seen that it consisted of two different elements, parts being hard and white and parts being soft and hæmorrhagic. The right lobe of the liver was extensively infiltrated with growth having similar characters to those of the thoracic mass. Outlying nodules were present besides the main focus, and two of these, of the size of hen's eggs, were soft and hæmorrhagic. A large mass of infiltrated glands presenting similar characters lay in the portal fissure and covered the head of the pancreas. In the lungs were many nodules of the size of filberts and both pleuræ showed numbers of small nodules of growth. Histologically the growth was the same in all regions and was a small round-cell sarcoma of the type usually termed lympho-sarcoma. It consisted of a number of large alveoli bounded by well-formed fibrous tissue of irregular size and filled with small cells having deeply staining round nuclei, a small amount of cytoplasm, and an excessively small amount of intercellular substance. The only difference observed microscopically in the portions that differed to the naked eye lay in the presence or absence of hæmorrhage. No corpuscles of Hassall were found in the thoracic mass. The crucial point in the diagnosis consisted in the question whether the condition was one of primary disease in the liver or of primary disease in the thymus. In this connexion the shape and situation of the thoracic mass, together with the histological appearances of the growth, strongly favour the view of its thymic origin. New growths of the thymus are excessively rare and a certain amount of doubt always obtains with reference to them. A somewhat similar mass to the one found in the present case and having identical histological characters is in the museum of St. George's Hospital. In this latter case the secondary nodules were chiefly found in the kidneys.

Remarks by Dr. MURRELL.—This case excited clinically a considerable amount of interest. The patient was seen by various competent observers and the following diagnoses were suggested: (1) malignant disease of the liver, either primary or secondary; (2) hypertrophic cirrhosis; (3) hydatids; (4) gall-stones; (5) Banti's disease; and (6) malaria. Against hypertrophic cirrhosis was the absence of alcoholic history. Too much importance could not be attached to this, but it was not without weight. There was nothing to support the diagnosis of hydatids beyond the fact that the patient kept dogs. The gall-bladder could not be felt and there was no history of biliary colic. The blood count seemed to exclude Banti's disease, although it is stated that in some cases of splenic anæmia the erythrocytes are at first increased in number. I have never met with such a case and can find no case of this description recorded. The diagnosis of malaria was certainly not justified by the fact that the man lived in Essex and in a locality in which there might be marshes. The diagnosis of malignant disease of the liver was not shaken by the fact that there were few symptoms or by the circumstance that the patient did not lose flesh whilst in the hospital. Primary carcinoma of the liver is rare and the probabilities were in favour of the enlargement of that viscus being secondary. With regard to the situation of the primary growth it was difficult to speak with certainty, but the physical signs indicated that it was in the thorax, and suspicion naturally fell on the mediastinum. If the disease had originated in the liver there is no reason why the thymus should have been involved, but if the thymus were primarily at fault the secondary deposit in the liver is what might be reasonably anticipated. Cases of malignant disease of the liver are so common that it is always a satisfaction to trace them to their source. Diseases of the thymus are rare and many years ago Friedleben[1] stated that there were no morbid conditions of the organ which could be recognised clinically. In this expression of opinion he was probably not accurate, but it must be admitted that diseases of the thymus in adults are not often diagnosed during life. Even amongst these diseases lympho-sarcoma of the thymus is one of the rarest and doubt exists respecting the authenticity of some of the reported cases. Virchow,[2] however, recognised the condition and pointed out that tumours originating in the thymus were more uniform and "more medullary" than those commencing in the glands. In November, 1868, Dr. (now Sir) William Selby Church[3] exhibited before the Pathological Society of London a growth which he thought should be ranked among the mediastinal sarcomatous tumours mentioned by Virchow. It was obtained from the body of a woman, aged 30 years, and apparently originated in the thymus. In the following year Dr. (now Sir) Richard Douglas Powell[4] showed before the same society a specimen of lympho-sarcoma of the anterior mediastinum which involved the region of the thymus and may, he thought, have originated in that gland. Grutzner[5] also in 1869 published the case of a boy, aged eight years, who died from a large mediastinal tumour which was found to

[1] Die Physiologie der Thymus-druse in Gesundheit und Krankheit vom Standpunkte Experimenteller Forschung und Klinischer Erfahrung. Frankfurt-a-M., 1858.
[2] Krankhafte Geschwülste, Band ii., p. 733.
[3] Transactions of the Pathological Society of London, vol. xx., p. 104.
[4] Ibid., vol. xxi., p. 358.
[5] Berlin Inaugural Dissertation.

be a lympho-sarcoma and was in the region of the thymus, and Bollazi[6] in 1887 observed a similar case in a boy, aged 14 years. Dr. H. D. Rolleston[7] in 1897 described a mediastinal tumour involving the thymus but it was apparently a hyperplasia rather than a sarcoma. Dr. John Lindsay Steven,[8] in his excellent work on mediastinal tumours, refers to Virchow's observation that sarcomata may originate in connexion with the thymus but states that of such tumours he had no personal experience. A. Jacobi[9] gives an excellent account of the diseases of the thymus, but in the collection of eight cases examined by himself there is not one of lympho-sarcoma. The existence of primary epithelioma of the thymus has been recognised by Hahn and Thomas,[10] by Ambrosini,[11] and by J. Peviot and Gerest.[12]

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Acute Cerebro-spinal Meningitis caused by the Diplococcus Intracellularis of Weichselbaum.

A MEETING of this society was held on April 28th, Mr. ALFRED WILLETT, the President, being in the chair.

Dr. R. C. B. WALL said that the object of his research was to establish the symptomatology of those cases of meningitis which had been proved by bacteriological methods to be associated with the presence of the diplococcus intracellularis of Weichselbaum. In 22 cases the infection was single. The analysis of these cases showed, firstly, that the age incidence could vary from two months to 35 years and that therefore, though occurring with greater frequency amongst the young, this form of meningitis was not confined by any narrow age limit; secondly, that there was no evidence either of the actual mode of infection or of spread by contagion; and thirdly, that the course of the disease was marked by two stages (1) the stage of acute meningitis and (2) the stage of internal hydrocephalus. These stages could be recognised by different series of symptoms and corresponded with the condition found at the post-mortem examinations. The characteristics of the first stage were sudden or rapid onset in the majority of cases, the most common initial symptom being headache or convulsions followed by a rapidly developing mental disturbance. The temperature was, as a rule, high during this stage and fell as the meningitis subsided. The pulse was frequent and in this stage generally regular. Vomiting was fairly frequent at the onset but did not, as a rule, recur until the second stage developed. There was no marked tendency towards constipation. Wasting was generally noticed early. Rigidity of the neck with resistance to forward flexion of the head but not to rotation was practically constant. Spinal opisthotonos was not common. Kernig's sign was present in the majority of cases. Irregular movements of the limbs and dissociated movements of the eyes were common in children. Convulsions, however, except at the onset, were less common at this stage of the disease than later. Blindness and deafness were apparently frequently present though in the early stage the profound mental disturbance usually present prevented any close examination of this point. Optic neuritis or other changes in the fundi were uncommon. The duration of the first stage in the fatal cases varied from three to 12 days. Those patients who recovered either passed into the second stage of hydrocephalus, the symptoms of which developed towards the end of the third week, or passed into a condition of somewhat tedious convalescence. Lumbar puncture performed in this stage showed that there was not much rise of tension of the cerebro-spinal fluid and that the fluid was turbid and contained cellular elements. The second stage was characterised by vomiting, occasional retraction of the upper lids so that a line of sclerotic showed above the cornea, irregular rises of temperature from a normal base line, mental disturbance apparently associated with the rise of intracerebral pressure, and periodic breathing in bad cases towards the end; if the synostosis of the cranial bones was not complete, evidence of the rise of intracerebral pressure could be found in the tenseness of the fontanelle or even in the opening out of the sutures and a rapid increase in the girth of the cranium. Lumbar puncture performed at this stage showed the cerebro-spinal fluid to be under considerable tension and the relief of the tension was often followed by an amelioration of the symptoms. The fluid, as a rule, was clearer than that obtained at ane arlier stage of the disease but less clear and slightly more albuminous than that obtained from cases of tuberculous meningitis. The post-mortem examination of cases dying in the first stage showed purulent meningitis without distension of the cerebral ventricles; those dying in the second stage showed distension of the ventricles with fluid with many collections of lymph (if any was present) in the base lymph cistern. Four cases of mixed infection by the meningococcus and pyogenic organisms were similarly analysed and also, two in which the pneumococcus was present with the meningococcus, and three in which the bacillus influenzæ was isolated as the second infection. The clinical course of these cases resembled those in which the infection was single. In seven cases in which the meningococcus was found in the cerebro-spinal fluid during life miliary tuberculosis was found to be present after death. The symptoms, course, and morbid appearances presented a mixture of those usually found in simple meningitis and those commonly found to be associated with acute tuberculosis. Dr. Wall then dealt with the morbid anatomy of acute general meningitis. He said that in this form of meningitis the purulent exudate lay between the pia mater and the arachnoid membrane. In the earlier stages of the disease the distribution of this exudate was general; in the later stages the largest collection was found in the great basal arachnoid cistern, the boundaries of which were clearly marked out when the condition frequently known as posterior basic meningitis was present. The rigidity of the neck which was so marked in these cases was probably to be explained as protective and preventing the mechanical disturbance of the inflamed arachnoid. In antero-posterior flexion of the head the cerebellum slid upon the medulla; rigidity of the neck prevented such movement. The intermittent strabismus and dissociated movements of the eyes frequently seen in these cases probably found an explanation not in neuritis by implication of the nerve trunks, in which case the strabismus should be permanent, but either in some irritative disturbance of higher centres in consequence of the inflammation or in a reversion to an antecedent stage in the scale of evolution; in the latter case the movements were comparable to the movements frequently noticed in children during sleep or chloroform narcosis. The three conflicting theories as to the production of hydrocephalus were compared and discussed. The balance of evidence seemed to point against the truth of any mechanical theory such as the blocking of the foramen of Magendie or the obstruction of the veins of Galen. The theory that seemed most in accord with the facts at present known was that which, recognising the arachnoid as a secreting membrane, supposed that there was some disturbance of the balance between secretion and absorption and considered the excess of cerebro-spinal fluid to be brought about in a manner similar to pleural or peritoneal effusions. The conclusions arrived at were as follows: firstly, meningitis produced by infection with the diplococcus intracellularis of Weichselbaum was associated with a series of symptoms to which had been applied the names "epidemic cerebro-spinal meningitis," "cervical opisthotonos of infants," and "posterior basic meningitis"; secondly, these conditions were probably identical and should therefore be included under a general term of "acute general leptomeningitis"; and thirdly, cases of chronic hydrocephalus were sometimes consequent upon this form of acute meningitis.

Dr. J. WALTER CARR said that he agreed with the view brought forward by Dr. Wall that posterior basic meningitis was not a separate and isolated condition but was one identical with acute cerebro-spinal meningitis. The virulence of the organism probably varied and in its less virulent form attacked young children and was limited to the base of the brain, whilst in its more virulent form it attacked adults and gave rise to meningitis of the vertex of the brain. Every

[6] Inaugural Dissertation, Brugg.
[7] Transactions of the Pathological Society of London, 1897, p. 200.
[8] The Pathology of Mediastinal Tumours, 1892.
[9] Transactions of the Association of American Physicians, vol. iii., p. 297.
[10] Du Rôle du Thymus dans la Pathogénie des Tumeurs du Médiastin, Archives Générales de Médecine, 1879.
[11] De l'Epithélioma du Thymus, Thèse de Paris, 1894.
[12] Archives de Médecine Expérimentale, vol. viii., p. 606.

form of the disease was met with, from cases with acute symptoms, terminating fatally in a few days, to the slow, prolonged cases which after months ended in recovery. And between these two extremes numerous intermediate forms occurred. Dr. Carr then referred to the mechanical theory of the production of the hydrocephalus; in acute cases he did not think the blocking of the foramen of Magendie could account for the dilatation of the ventricle, but in the chronic cases a good deal was to be said in favour of that view. He pointed out that the obstruction might sometimes be in the aqueduct of Sylvius or in the upper portion of the central canal of the spinal cord. He mentioned a case which seemed to him to prove that the dilatation was due to chronic obstruction. In the case of a child with hydrocephalus following on posterior basal meningitis he had had occasion to tap the ventricle and the fluid drawn off was normal cerebro-spinal fluid, and on subsequent occasions the fluid presented the same characters and therefore was probably not of inflammatory origin. He did not attach much importance to Kernig's sign, as he had seen it in cases in which there was no evidence of meningitis and it had been absent in cases in which meningitis had been present.

Dr. H. S. FRENCH asked whether by simply microscopic examination of the fluid withdrawn by lumbar puncture the diagnosis could be made or whether it was necessary to cultivate the organism. He also asked if lumbar puncture was used solely as a method for diagnosis or whether it was of value as a means of treatment.

Dr. F. E. BATTEN pointed out that blindness was one of the most striking features of the disease and that the pupils usually remained active to light. He asked if Dr. Wall had any explanation to offer of the blindness which almost certainly was not due to any affection of the lower path.

Dr. R. L. BOWLES said that the source of the infection was very doubtful. He mentioned three cases of the disease which occurred in one family; two of the children recovered completely but the third never recovered wholly and was always subject to headache. The source of the affection in this family was attributed to the decomposition of a brace of birds which had long remained concealed behind a box. He believed that considerable benefit resulted from the use of mercury.

Dr. G. NEWTON PITT mentioned a case in which dilatation of the central canal of the spinal cord had followed on hydrocephalus produced by meningitis.

Dr. WALL, in reply, said that he did not believe the mechanical view of the production of hydrocephalus would be finally accepted. The microscopical examination alone of the fluid obtained by lumbar puncture was not sufficient to make a diagnosis but that cultivation should be made from the fluid. As a method of treatment he considered repeated lumbar puncture to be of considerable value. The blindness occurring in this disease he attributed to affections of the cortex in the occipital region.

MEDICAL SOCIETY OF LONDON.

Discussion on the Treatment of Rectal Cancer.

A MEETING of this society was held on April 27th, Mr. A. PEARCE GOULD, the President, being in the chair.

Mr. W. WATSON CHEYNE opened the discussion on the Treatment of Rectal Cancer. He summarised his conclusions as follows. Excision of the rectum was a valuable method of treatment in cases of cancer in that situation and a considerable proportion of cases were much benefited by it and might indeed remain free from disease for a long time. The first question to be determined, therefore, in approaching a case was the possibility or otherwise of excision. If the circumstances were suitable the operation should be strongly advised. The most important point in determining the suitability of cases for excision was to ascertain the mobility of the affected portion of the bowel and also the presence of signs of disease elsewhere or a bad general condition of the patient. The situation of the disease was not so important. In cases unsuitable for excision colotomy should not necessarily be done at an early period. Some patients could go on to the end without colotomy and in any case the operation should not be hurried unless there were reasons calling for immediate operation, such as a tight constriction and possibly, therefore, impending obstruction, communication with the bladder, urethra, vagina, &c., much tenesmus, and irritability of the rectum. As regards the methods of removing the bowel, the sacral method was the one most universally applicable; the vaginal method was good in some cases but the perineal method was rarely of value. Abdominal or combined abdominal and perineal operations were still on their trial. In excising the rectum preliminary colotomy was only rarely advisable. Measures to insure asepsis were of great importance, such as prophylactic injections of antistreptococcic serum, disinfection of the perineum, and occlusion of the anus. Union of the ends of the bowel should be aimed at but should only be carried out if the upper end could be drawn into the lower end for at least half an inch. Failing the advisability of union of the ends the bowel at its point of attachment to the skin should be firmly ligatured so as to prevent the exit of fæces for three or four days or, as an alternative, a Paul's tube might be tied in. Further, Gersuny's half or three-quarter turn of the bowel was of value as diminishing the subsequent incontinence.

Mr. H. F. WATERHOUSE read a paper on the Treatment of Rectal Cancer; the following were the conclusions arrived at. Excision of the neoplasm together with removal of the glands which would first become infected with the disease was the treatment to be adopted whenever practicable. For the purpose of treatment rectal cancers might be classified as follows: firstly, generalised cancer of the rectum; secondly, anal or sphincteric cancer; thirdly, cancer involving any segment of the second part and lower part of the first portion of the rectum; and fourthly, cancer of the upper portion of the first part of the rectum. In general terms it might be said that in the first class colotomy alone was indicated; for the second class perineal excision of the anal canal; for the third class parasacral excision of the neoplasm after removal of the coccyx; and for the fourth class excision of the growth by cœliotomy, suture of the upper end of the rectal segment, and inguinal colotomy. In fully half of the cases the patient first came under the notice of the surgeon when the time for radical treatment was past. Mobility of the rectal growth signified that the disease was limited to the rectum and therefore indicated radical treatment. Immobility, on the other hand, denoted invasion of perirectal tissues and contra-indicated excision. Extensive resections involving parts of neighbouring viscera were not worth doing. The mortality of excision for cancer was probably about 18 per cent. The majority of patients operated upon by excision had markedly benefited thereby. The combined abdomino-perineal operation was not to be undertaken except when there was no alternative as the shock of the operation was likely to be extreme. The parasacral incision gave the best access. Excision of the coccyx almost always sufficed without removal of any portion of the sacrum—a procedure which of necessity increased the shock and hæmorrhage, both of which might be serious. The facility with which the rectum could be drawn down towards the anus when the reflection of peritoneum was simply divided was astonishing to those who saw this method for the first time. The crux was the treatment of the divided ends of bowel. The ideal method which would probably be more largely practised in the near future consisted in shelling out the mucous membrane of the anal segment and stitching the lower end of the upper segment to the anal margins, this method preserving the sphincters intact. Union of the ends of bowel should be attempted in all cases and would almost always prove, in part at least, successful. No tension was permissible, for if it existed the sutures cut out to a certainty. Union by first intention occurred but rarely throughout the whole extent of the wound, but might be expected in the upper three-quarters of the incision. Every care must be taken by preliminary treatment at the time of operation to avoid fouling of the wound by fæcal matter, otherwise stercoral phlegmon was very prone to occur. A preliminary colotomy was never necessary. In cases unsuitable for radical treatment colotomy was invaluable when demanded by obstruction or intense pain on defecation, but was not to be performed as a routine treatment and was to be postponed as long as possible rather than done at the earliest moment.

Mr. D. H. GOODSALL said that he differed entirely from the two former speakers with regard to the performing of colotomy which he considered should be done as soon as possible. The patient did not, as a rule, seek relief until the disease had existed on an average for about nine months and then the bearing-down pain and the frequent action of the bowels were the most frequent symptoms. He mentioned

the case of a patient with an epithelioma of the anus which after removal recurred locally within a year; colotomy was then performed and subsequently the growth was removed. The patient enjoyed immunity from any recurrence for four years and lived for six years after the colotomy. The disease was twice as frequent in men as in women and relief was rarely sought until the disease was well advanced. He thought that colotomy relieved the diarrhœa and pain from which the patients suffered. He was of opinion that colotomy should be first performed and then about three weeks later the radical operation for removal should be done.

Mr. F. C. WALLIS said that the early diagnosis was of the greatest importance in the disease, for many patients were treated for a long time for diarrhœa and when a rectal examination was made the disease was so advanced as to preclude removal. When carcinoma of the rectum occurred in young people it was often so rapid that symptoms did not occur until the surrounding tissues were involved and removal was impossible. These cases in young individuals were very unsatisfactory. The best cases for operation were those which did not surround the gut and were freely moveable. Patients should always be examined under an anæsthetic, for in some cases a growth which when examined without an anæsthetic appeared to be fixed under an anæsthetic appeared to be moveable. His experience was that when annular growths were removed they did not recur locally but in the surrounding tissue. With regard to uniting the end of the bowel he thought that the method of invaginating the bowel was the best. He was in the habit, in order to prevent septic absorption, of allowing a stream of hazeline solution to run over the wound. He thought that the colon should be opened at the same time as the colotomy was performed, as the omission of this often gave rise to considerable discomfort.

Mr. A. E. J. BARKER thought that resection of the rectum did not place the patient in any better position than a colotomy. He had seen patients on whom he had performed colotomy live eight or nine years after the detection of the rectal condition.

The PRESIDENT said that there was evidently great difference of opinion with regard to the performance of colotomy or resection of the rectum. When considering a case himself he always thought, "Is the case suitable for excision," and if there were reasonable prospect of recovery the excision operation should be performed. He valued colotomy greatly and stated that it often relieved hæmorrhage from which these patients suffered. He mentioned the case of a young man with a cancerous growth high up in the rectum on whom three years ago colotomy was performed, and now three years later the patient was in good health and the growth had made no progress.

Mr. WATSON CHEYNE and Mr. WATERHOUSE replied.

CLINICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on April 24th, Mr. HOWARD MARSH, the President, being in the chair.

Mr. CHARTERS J. SYMONDS showed a case of Transverse Fracture of the Patella in a Limb previously amputated below the Knee. The patient's leg was removed in the lower third for a crushed foot. Walking on crutches two months later he fell and was readmitted into Guy's Hospital with a simple transverse fracture of the patella. The laceration of the capsule was not extensive, there was no grazing or bruising of the skin, and it was difficult to be clear whether he had struck the patella or not. The patella was sutured by wire by the open method. The joint was massaged in a few days and at the end of a fortnight he could flex the knee to a right angle. The range of movement was at present complete.

Mr. E. BEAUMONT showed a case of Excision of the Spleen for Rupture. The early particulars of this case were published in THE LANCET of Sept. 13th, 1902, p. 744. The patient was exhibited to show his appearance 11 months after the operation. A wagon passed over him on May 20th, 1902. The abdomen was opened immediately, when much blood escaped. The spleen was found to be completely ruptured and was removed. The abdominal cavity was flushed with hot sterilised water and the abdomen was closed. On the sixth day after the operation fluid was found at the base of the left lung and six ounces of bloody serum were removed. His temperature at this time was 105° F. and subdiaphragmatic abscess was suspected. An incision was made in the loin over the angle of the eleventh rib and this bone was resected. The stump of the spleen was easily examined but no pus was found. The examination of the blood showed large numbers of streptococci. He next developed pleural effusion on the left side, from which two pints of blood-stained fluid were removed. Anti-streptococcic serum was injected and on the fifth day of the injection the temperature fell to normal (but rose again next day) and the patient was conscious for the first time for nine days. All the wounds about this time became septic and were swabbed with pure carbolic acid. On June 5th pus was found in the left pleura. Portions of the seventh and eighth ribs were resected and the cavity was evacuated. The temperature continued to rise to 104° and 105° daily. The cavity was washed out with weak lysol but this gave rise to acute dyspnœa and had to be discontinued. The continuous injection of a small quantity of oxygen gas into the cavity by a soft rubber tube was next tried. The temperature quickly fell, the discharge ceased, and general repair set in in all the wounds, and from this time he made an uninterrupted recovery. For a month the lymphatic glands were notably enlarged and the pulse was never below 112. At the present time, 11 months after the accident, the patient appeared to be in normal health.

Mr. M. GRAHAM SIMPSON showed a case of Separation of the Upper Epiphysis of the Femur in a youth, aged 18 years. There was no history of trauma but one of pain in the hip ten months ago. He now complained of pain in the hip on walking far and limped. The trochanter was prominent; there were slight shortening, loss of rotation, and abduction and wasting of the thigh. A skiagram showed separation of the head of the femur. The diagnosis was doubtful. Mr. Simpson considered the condition to be due either to traumatism or caries sicca.

Mr. CUTHBERT S. WALLACE showed a case of Deformity of the Neck of the Femur coming on without symptoms in a boy, aged 13 years. The patient went before a medical man for the purpose of an examination as to general health before joining a benefit society. It was then discovered that there was a commencing lateral curvature of the spine and that the right leg was shorter than the left. There was no history to account for this discrepancy. A skiagram showed a general thickening of the femoral neck. The outlines of the head, neck, great trochanter, and acetabulum were fluffy and indistinct.—The PRESIDENT mentioned the case of an active and healthy boy who became slightly lame; he never complained of any pain, but on examination it was found that the neck of the femur was nearly at a right angle to the shaft and that the trochanter was above Nélaton's line. The movement of the joint was free. He came to the conclusion that there was chronic tuberculous osteitis of the head of the bone.

Mr. WALLACE also showed a case of Fractured Pelvis in a man, aged 40 years, who stepped from a ladder and sustained a severe injury to the hip. There were considerable limitation of movement and an absence of the prominence due to the great trochanter. A skiagram showed that the femur was intact and that the absence of the prominence of the great trochanter was due to a fracture of the pelvis and a driving in of the bone forming the acetabulum.

Dr. F. E BATTEN showed a Cretin with Marked Cyanosis of the Extremities. The child, aged three years and nine months, was the ninth of nine children; the others were healthy. The cyanosis of the extremities was first noticed when the child was one year and nine months old. She had not learnt to walk and could only say a few words. She had a typical cretinoid appearance. There was marked cyanosis of the extremities which varied considerably from time to time. The heart sounds were feeble and distant but no murmur could be detected.

Dr. R. MURRAY LESLIE showed a case of Chronic Bulbar Paralysis in a girl, aged 22 years. There had been no acute affection to which the present illness could be attributed. In Jun , 1902 (ten months ago), the patient noticed inability to pronounce certain words and letters distinctly. This condition gradually became more pronounced until she practically lost all power of articulation. A few months later she found that she was unable to protrude her tongue properly and about the same time she had some difficulty in swallowing solid food and last January she began to have regurgitation of liquid food through the nose. For some months the patient had had to support the back of the head in order to prevent it falling

backwards. Articulation was indistinct; the tongue was extremely atrophied and could not be protruded beyond the teeth. Fibrillary tremors were present. Taste was unaffected. The palate was almost completely paralysed. There was complete paralysis of the left vocal cord. There was abductor paralysis of the right cord which could, however, be adducted so as to cross the middle line and meet its fellow on the opposite side. There was thus only partial aphonia. There was considerable difficulty in swallowing. There were some weakness and atrophy of most of the muscles of the face on both sides. The eyes could not be closed completely. There was manifest weakness of the elevators of the upper lip on the right side. Fibrillary twitchings were present in several muscles, particularly over the chin and at the corners of the mouth. The facial muscles reacted readily to a fairly strong faradic current. The muscles of the neck were very weak. There was general wasting of the muscles of the body and the patient weighed only five stones. She felt, however, perfectly well in her general health and the thoracic and abdominal organs were healthy. The deep reflexes of the upper extremity could not be elicited and there was no jaw-jerk. The knee-jerks were brisk and there was no ankle-clonus. There was no affection of sensation and the special senses were normal. The patient had been treated with subcutaneous injections of strychnia without perceptible benefit.

DR. CLIVE RIVIERE showed two cases of Congenital Hypertrophy of a Lower Limb. In the first case, that of a baby, aged three and a half months, the difference in size of the legs was first noticed when the child was two weeks old and the deformity had been increasing since that time. The right foot was about a quarter of an inch longer than the left. The enlargement was very symmetrical and greater at the proximal than at the distal extremity of the limb; it was formed mostly of the soft tissues but an increase in size of the bones also was shown by a skiagram. The other limbs were healthy and there were no congenital tumours or other abnormalities. In the second case, that of a baby, aged four and a half months, the enlargement of the lower part of the left leg was noticed at birth. Enlargement of the thigh was not noticed till the child was two months old. The left leg appeared to be about a quarter of an inch longer than the right; the enlargement was most marked in the thigh. There was perhaps some slight increase in the size of the right foot also. The other limbs were normal.

DR S. VERE PEARSON showed a case of Herpes Brachialis with Deltoid Paralysis. The patient, a painter, aged 52 years, on getting up one morning noticed a sharp burning pain about the left arm and inability to move the upper part of the arm. On the following day an eruption appeared covering the left arm, the patient describing it as "clusters of watery blisters." On admission to the hospital three weeks later the whole of the left arm was covered with a herpetic eruption already partly healed. This eruption extended from the shoulder to the wrist and was present on every aspect of the limb, in distribution corresponding to the terminations of the nerves from the posterior roots of the fifth cervical to the second dorsal segments. There were complete paralysis of the left deltoid with some atrophy and almost complete paralysis of the latissimus dorsi. The other muscles of the left extremity were flabby and rather wasted. The herpes gradually healed. The paralysis remained stationary for about a fortnight, the other muscles of the left extremity becoming more wasted from disuse. Then the deltoid and latissimus dorsi muscles began to regain their power and they continued to do so. The electrical reactions were normal. Considerable neuralgic pain persisted up to about three weeks previously. There had been no loss of sensation. The patient still showed considerable loss of power and wasting in the left deltoid muscles, and slight erythema where the herpes was distributed. The case was of interest on account of, firstly, the rarity of motor paralysis associated with herpes zoster; and secondly, the rarity of herpes zoster of the sixth, seventh, and eighth cervical roots.—Dr. E. FARQUHAR BUZZARD said that he had collected and published a series of cases similar to that shown. In one case of the series there was paralysis of the same muscles but no herpes. This case, however, showed an impairment of sensation of a dissociation kind. He believed that the cases were vascular in origin and that the lesion was situated near the point of junction of the anterior and posterior roots.

DR. PEARSON also showed a case of Bradycardia in a farmer, aged 46 years, who whilst at work in a western state of America, where he had lived for a great part of his life, had a sunstroke. Since that time his pulse-rate had ranged between 20 and 36 beats a minute. He was never seriously ill before. There was no knowledge of what his pulse-rate had been before the sunstroke. He was able to get about, but had been unable to do any work for the last 18 months because he found himself incapable of any exertion. He was a well-nourished man of nervous temperament. The heart beat usually 26 times a minute; sometimes it was as frequent as 32 and at other times as slow as 24. The pulse wave was good and the tension was rather high; the artery was somewhat thickened. Examination of the heart showed that the left ventricle was large, the apex beat being under the fifth rib, just outside the nipple line; no other abnormalities were noticed about the heart. All the other organs appeared to be healthy. Since the onset of the attack the patient had been subject to syncopal attacks, at first as many as four or five a day, lately very seldom—only about six in the last year. There was a momentary dizziness and then complete unconsciousness, without convulsions or paralysis, lasting from four to eight minutes.

MR. T. CRISP ENGLISH showed a case of a large Spontaneous Ventral Hernia in a man, aged 62 years, who about 12 years ago noticed a small swelling in the right semilunar line rather below the umbilicus, and this was attributed by the patient to heavy lifting. It steadily increased in size, but caused no inconvenience until a year ago when its weight prevented his working and had caused pain in the back with occasional vomiting. The patient stated that he had always been stout, had not suffered from a cough, and took only a moderate amount of alcohol. A belt had been worn for the hernia since its first appearance. On examination there was a very large ventral hernia springing by a broad base from the right semilunar line and measuring 17 inches vertically and 13 inches transversely. It occupied the middle line and hung down on to the groins, it was resonant all over, and could not be reduced at all into the abdomen. The umbilicus was not on the skin covering the hernia, but on the abdominal wall in the deep fold between the hernia and the abdomen on the left side.

MR. W. BRUCE CLARKE showed a case of Multiple Rodent Ulcers in a man, aged 37 years, who two and a half years ago first noticed a small red spot on the outer canthus of the left eye, which gradually grew in size. Seven months later a second spot occurred near the outer canthus of the right eye and increased slowly in size. There was beneath the right eye a large red swelling reaching from the internal canthus outwards for one inch, three-quarters of an inch in breadth, irregular in shape, and covered with dry scales. Similar excrescences were present on the left side, but smaller and more flattened. There were several small suspicious-looking spots on the face. The scrapings from the ulcer were examined microscopically and showed it to be a rodent ulcer. Subsequently all suspicious spots were excised, as well as the growths beneath the eyes. These were examined separately and the structure of rodent ulcer was shown in each. The patient was now undergoing electrical treatment with the x rays four times a week and was deriving considerable benefit from it. The ulcers were healing quickly.

EPIDEMIOLOGICAL SOCIETY.—A meeting of this society was held on April 17th, Mr. Shirley F. Murphy being in the chair.—Dr. J. T. C. Nash, medical officer of health of Southend, read a paper on the Seasonal Incidence of Typhoid Fever and Summer Diarrhœa. He commenced by referring to the theories that had been advanced in explanation of the seasonal prevalence of typhoid fever—namely, Pettenkofer's of the rise and fall of the ground-water coöperating with other conditions; that of Mr. Shirley Murphy who noted an increased incidence in London after floods in the valley of the Upper Thames; that of Dr. Edward Ballard which ascribed diarrhœal diseases generally to the growth of microbes in the soil when that reached a certain temperature at a moderate depth; and that of Sir Charles A. Cameron of Dublin who 20 years ago had pointed out "the possible relation of typhoid fever to the consumption of specifically polluted oysters." Dr. Nash then expressed his conviction that the last was the cause in far the larger proportion of cases, including those derived secondarily from the primary cases, than was generally imagined, though each of the others might contribute directly or indirectly to the incidence and spread of the disease. Sir C. A. Cameron's suggestion had been confirmed in America by the observations of Dr. Conn and in this country by those of Sir W. H. Broadbent, Dr.

Arthur Newsholme, and others, whose representations had led to the extensive investigation of the oyster and allied fisheries undertaken for the Local Government Board by Dr. H. T. Bulstrode. Until the year 1899 oysters, &c., eaten raw had alone been deemed dangerous, but in that year Dr. J. C. Thresh suspected "cooked" cockles to have been the cause of 23 cases of illness at Shoeburyness, and it had since been proved by Mr. Foulerton and others that the so-called cooking, which consisted in plunging the molluscs in trays or sieves into boiling water until they opened their shells, was quite insufficient to raise the interior to the death point of the bacilli which retained their vitality and virulence. Dr. Nash then proceeded to demonstrate the influence exerted by the close season for oysters on the general prevalence of typhoid fever. This was from May 14th to August 4th and though there were no legal restrictions on the sale of cockles they, too, were not in good condition and the consumption was small, whereas it was at its height during August and September, after which, the "season" at Southend being over, most of the shell-fish shops were closed and the street hawkers ceased to ply their trade. Concurrently the monthly notification rose suddenly from 40 per cent. below the mean in July to 30 per cent. above it in August and 190 per cent. in September, when it as rapidly declined. Many of the visitors no doubt returning to town helped to swell the September incidence, but the London curve was marked by a rise in October and November, great months for public dinners. At Ipswich Mr. G. S. Elliston traced at least 25 per cent. of the autumnal cases to the consumption of shell-fish, mostly cockles from the grossly polluted river Orwell, and Mr. C. H. Russell of Great Yarmouth noted the correspondence of the monthly incidence to the consumption of shell-fish, especially mussels from the Yare. The sale of these was prohibited in 1900 and a marked diminution in the number of cases notified was observed. Even in the inland county of Wilts Mr. J. Tubb Thomas could trace a majority of the cases to a like cause. Dr. Newsholme ascribed 30 per cent. of those in Brighton directly or indirectly to shell-fish, while Dr. Nash considered that no fewer than 70 per cent. of those at Southend were due to the eating or the handling of shell-fish, and an inquiry into the extent to which shell-fish were consumed by the local population brought out some surprising results. While the attack rate for the entire population was 5·0 per 1000, that for the shell-fish-eating section (not 5 per cent. of the whole) was 56·0 per 1000, among the dealers and their employés it was 160·0 per 1000, and for the rest of the population, even including those secondary to shell-fish cases, it was only 2·3 per 1000; in short, the incidence was 38 times as heavy on those who ate or handled shell-fish of any kind as on those who did not. He believed that the part played by flies in the spread of infection was considerable and he had during the last two summers prepared charts showing the monthly incidence of disease concurrently with the prevalence of flies, from which it appeared that whereas in July and August, 1901, there had been 23 deaths from diarrhœa among infants under one year of age, in 1902 there had not been one, though the four-foot earth temperature had since June exceeded 56° F. (Ballard's critical temperature), while rain had fallen moderately on 22 of the 62 days—conditions favourable to the development of microbes; but the extraordinary scarcity of flies was a phenomenon attracting universal observation. For a little less than three weeks in September, however, they made their appearance in Southend, during which period no fewer than 13 deaths of infants from diarrhœa were reported, the flies and the disease then disappearing suddenly together. Mr. Foulerton having found flies taken from a refuse heap to harbour numerous organisms, such as bacillus coli, proteus vulgaris, bacillus enteritidis of Gaertner, &c., it was not surprising that they should be active factors in the spread of diarrhœa, and of typhoid fever also should they chance to come across crude typhoid fever stools. Milk infected by them was notably the chief factor in the case of diarrhœa. The remedies were to be sought (1) in the better disposal of sewage, in which earth treatment should never be omitted if there was any probability of the effluent reaching the sources of potable water or oyster-beds; (2) in precautions against fæcal contamination of vegetables; and (3) in the most scrupulous protection of all foods, especially milk, from flies, alike in the shop and the home. A study of the natural history of flies with a view to the destruction of the larvæ and their breeding places was much to be desired.—A discussion followed in which Dr. H. Franklin Parsons, Colonel J. Lane Notter, R.A.M.C., Dr. Louis C. Parkes, Dr. E. W. Goodall, Dr. Bulstrode, Dr. Newsholme, Dr. W. Butler, Lieutenant-Colonel A. M. Davies, R.A.M.C., and Mr. Shirley Murphy took part.

HARVEIAN SOCIETY OF LONDON.—A clinical evening of this society was held on April 23rd, Dr. W. Winslow Hall, the President, being in the chair.—Dr. Wilfred Harris showed two cases of Mitral Stenosis complicated by pulmonary regurgitation. Neither patient had suffered from rheumatism. One of them, a man, aged 28 years, previously quite healthy, began to suffer from dyspnœa four years ago. Last Christmas he became worse, failure of the right side of the heart developed, and he lost his voice. There was a long rough presystolic murmur at the apex, with a marked thrill. The pulmonary second sound was followed by a loud blowing diastolic murmur, loudest at the third left space and intensified on expiration. The pulse was small and thready, not collapsing. There was no carotid throbbing. The husky voice was due to paralysis of the left vocal cord, probably caused by pressure of the dilated auricle on the recurrent laryngeal nerve. The patient had improved considerably. The venous pulsation in the neck had ceased and the heart action was much slower, with increase in intensity of the pulmonary second sound and of the diastolic bruit. The second case, very similar, though not so severe as the first, occurred in a single woman, aged 34 years, who had never had rheumatism. She first noticed dyspnœa 13 years ago. Two years ago she had a typical presystolic murmur with accentuated pulmonary second sound, but no bruit was audible at the base. In March last year, in addition to the presystolic murmur at the apex, there was a typical blowing diastolic murmur at the third left space, conducted down the left side of the sternum, with a heaving impulse in the epigastrium. The pulse was small; there were no carotid throbbing and no dilatation of the left ventricle. The mechanism of the pulmonary incompetence in these cases was apparently simple dilatation of the root of the pulmonary artery, produced by the chronic high pressure in the pulmonary system, as no lesion of the valves had been recorded in cases which had come to a necropsy.—Dr. E. H. Colbeck commented on the rare occurrence of lesions of the pulmonic valve. In the cases shown the leakage was slight, inasmuch as the pulmonic second sound was clearly audible and the murmur followed the sound. Further, the respiratory sounds were unaffected. The explanation of the leakage as due to chronic forcing of the valve was far from satisfactory, since high blood pressure in the pulmonary circuit was of common occurrence without any forcing of the valve. Dr. Colbeck was inclined to ascribe the occurrence of a pulmonary lesion in cases of mitral stenosis to an accidental cause, such as distension of the auricular appendix or thrombosis in this situation, with pressure on the pulmonary artery and disturbance of the valvular mechanism.—Mr. E. Laming Evans showed a case of Coxa Vara presenting some peculiarities. It occurred in a youth, aged 17 years, who was treated for rickets during infancy and was said to have had an attack of "paralysis" at the age of eight years. Up to the age of 12 years he was able to play football without any inconvenience but he then began to limp. The left hip-joint was kept in a position of slight flexion and movement in all directions was too slight to be measured, although there was no ankylosis. The right hip-joint was kept flexed for a few degrees and it could be flexed further to a right angle. Some abduction could also take place. Whitman, in describing 39 cases, mentioned three which had abduction associated with flexion and internal rotation. He described this type of deformity as almost always bilateral and accompanied by slight permanent flexion of the thighs; thus the lumbar lordosis was exaggerated, whereas in the ordinary form it was diminished. This description tallied with the case shown with the exception that there was no inversion of the legs and feet. Mr. Evans thought that the deformity might be produced, in part at any rate, by torsion of the upper third of the femur. If so, the case would not be one of true coxa vara, but rather intermediate between this disease and the forms of multiple rachitic deformities so common in children. He suggested treatment by subtrochanteric cuneiform osteotomy of the femur.—Mr. Campbell Williams said that the case appeared to be an unusual

form of coxa vara. The limb was not typically adducted nor was the foot inverted. He thought that the limitation of flexion and extension was largely due to locking of the great trochanter against the acetabulum.—Dr. Atwood Thorne showed a man, aged 37 years, who complained of discomfort in the mouth and of occasional difficulty in breathing through the nose. The soft palate was found to be closely adherent to the posterior pharyngeal wall. The mucous membrane in the neighbourhood was thickened and covered with small nodules of a reddish colour, the appearance, especially of the uvula, suggesting lupus. The man, however, had been under treatment for four years and in consequence of the benefit received from potassium iodide and mercury, with relapses on giving up treatment, the condition had been diagnosed as specific leucoplakia. There was a history of primary infection 16 years previously and the man had no lupus on the face.—Mr. F. Jaffrey showed a man with a Cystic Swelling in Front of the Trachea in the situation of a thyro-lingual cyst, but probably of the nature of a bursa due to friction by a collar-stud.—Mr. Jaffrey also showed a case of Fissured Tongue in a man who had been a great smoker and heavy drinker. Though the tongue was moist the patient complained of a sense of dryness and soreness. No treatment seemed to do any permanent good in these cases.

BRITISH GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on April 23rd, Dr. Heywood Smith, the President, being in the chair.—Dr. J. Inglis Parsons exhibited a Pedunculated Uterine Fibromyoma of about the size of an orange, removed from a single woman, 23 years of age, on account of the great suffering to which it had given rise. It was, he said, unusual to meet with this form of tumour, and still more to find one pedunculated, at such an early age, but the patient's statement on that point had been corroborated by her father. The specimen was discussed by the President, Dr. J. A. Mansell Moullin, Dr. Herbert Snow, Dr. C. H. F. Routh, Dr. H. Macnaughton-Jones, Dr. R. H. Hodgson, and Dr. G. O. Hughes.—In connexion with Mr. E. Stanmore Bishop's paper on Prolapse of the Uterus[1] read at the December meeting Dr. Frederick Edge read a note concluding that as the whole visceral layer of the pelvic fascia is concerned in the support of the uterus and is elongated and attenuated in cases of prolapse, in this displacement a condition exists which could not be remedied by Mr. Bishop's operation upon the sacro-uterine ligaments dealing with merely one portion of that fascia; in cases that could be dealt with by the vagina he recommended amputation of the cervix with double lateral colporrhaphy and vaginal fixation and when an abdominal operation was required supravaginal amputation and careful suture of the parts. The worst cases were perhaps best treated by complete rest and a carefully applied support.—Dr. Parsons considered Mr. Bishop's operation to be a perfectly scientific one, but that, as only 11 cases had been as yet done by it, the time had not come to decide upon its efficacy. It was, however, a more serious operation than injecting the broad ligaments with quinine, by which, in the past six years, he had treated 70 cases with very few failures, and he believed that this operation, which only took about a few minutes and could be done under gas, would be widely adopted because of its simplicity and safety. Replying to questions from Dr. Macnaughton-Jones and Dr. Snow, he said that the effusion of lymph which followed the injection was no doubt due to a plastic cellulitis, but there was no inflammation, nor, save in the most exceptional cases (1 in 30), any rise of temperature because no toxin was introduced. He injected one drachm of a solution containing 12 grains of quinine in equal parts of distilled water and dilute sulphuric acid into each broad ligament. Having passed a sound into the bladder and ascertained its position, if one ran the needle in at a point below a horizontal line through the external os, the patient being in the lithotomy position, half an inch or an inch below the uterus and a little outwards, the ureter and uterine artery were both out of the way.—Dr. Hughes had found prolapse when not due to overweight of the uterus always associated with deficiency in the pelvic floor. It was, therefore, always desirable to remove any uterine tumour in such cases and to repair any injury to the pelvic floor.—Mr. Bishop explained that owing to totally unforeseen circumstances he had been prevented from being present at the discussion of his paper. Of Dr. Parsons's method to which their attention had been more particularly directed that evening he would like to have some experience before saying much; after what he had heard he would certainly try it. A number of previous methods had been alluded to in the criticism upon his own operation, but upon examining those methods he found that they either depended on a union between the cervix and the posterior vaginal wall and were not operations upon the utero-sacral ligaments at all, or they were attempts to operate upon ligaments still existing. His paper and his operation were limited to prolapse and procidentia in cases in which the utero-sacral ligaments had practically ceased to exist, were absolutely torn through, or were so atrophied as to be no longer available and the discussion had only been confused by the mention of retroflexion. He denied that his operation was exceptionally severe and, compared with many of the procedures brought forward as better, it had the great advantage of not leaving a married woman unfit for sexual life. With the patient in the Trendelenburg position and in a good light, there was no difficulty in recognising the ureters, vessels, or nerve trunks behind the peritoneum and avoiding any danger of wounding them. Professor A. Birmingham and Professor A. F. Dixon had shown that the utero-sacral ligaments were by no means horizontal as Dr. Edge supposed, but inclined at an angle of 45 degrees. He was convinced that operations for the relief of intractable prolapse should aim at the restoration of the normal condition rather than the substitution of one deformity for another, even though the latter was an improvement upon the former.—A paper on Intestinal Obstruction, an Uncommon Complication of a Ruptured Ectopic Gestation, by Mr. F. Bowreman Jessett, in his unavoidable absence was read for him by Dr. J. Hutchinson Swanton.

LIVERPOOL MEDICAL INSTITUTION.—A meeting of the pathological and microscopical section of this society was held on April 23rd, Mr. Rushton Parker, the President, being in the chair.—Dr. K. A. Grossmann read a paper on Coloboma Cyst, the condition being in the case related associated with microphthalmos. The patient, a girl, aged 16 years, had had a cyst of the size of a pigeon's egg bulging into the left lower lid. The orbital cavity was small and was almost completely filled by the cyst; the right eye was smaller than normal and exhibited a large choroidal coloboma. After removing the cyst a small body about one quarter of an inch in diameter was found behind it in the deeper part of the orbit. The cyst was lined in part by columnar epithelium containing pigment in places; among the cells were peculiar bodies resembling Pacini bodies. No connexion was traceable between the cyst and the small body above referred to; this latter proved to be a microphthalmic rudiment lined by folded retinal tissue of the ciliary region type. The pathological anatomy of coloboma was discussed, Dr. Grossmann stating that in the cases which had come under his personal observation, five in number, no hereditary history of the malformation was traceable; this experience was at variance with the recent account of the condition given by von Heppel. The paper was illustrated by micro-photographic slides.—Dr. W. Blair Bell showed an Appendix with Perforation, removed by operation within a few hours of the onset of symptoms, a stercolith being present.—Sir William M. Banks showed a Melanotic Sarcoma removed from the vesico-vaginal septum; also a large Mammary Growth, fibro-adenomatous in nature.—Dr. W. B. Warrington described specimens illustrating Cerebral Vascular Disease: (1) a large aneurysm of the middle cerebral artery, causing death by rupture (there was no history of either syphilis or embolism); (2) miliary aneurysms; (3) thrombosis of the basilar artery, occurring during alcoholic coma and associated with rigidity of all four limbs; (4) syphilitic meningo-encephalitis with extreme endarteritis; and (5) extreme atheroma of the basal arteries.—Dr. J. E. Nevins and Dr. F. Griffith showed specimens from a case of Carcinoma of the Pleura with widespread secondary growths.—Mr. C. G. Lee and Mr. E. M. Stockdale showed a specimen of Melano-sarcoma of the Choroid.—Dr. Edgar Stevenson and Mr. Stockdale showed a Tumour of the Retina which was considered an endothelioma.—Mr. Robert Jones showed a Vascular Endothelioma of the Head of the Fibula.—Mr. C. T. Holland and Dr. C. J. Macalister showed Radiographs of two cases of Aortic Aneurysm: (1) the case of a man who when first seen had a large pulsating aneurysm; when seen two years later the

[1] THE LANCET, March 14th, 1903, p. 725.

aneurysm was no longer pulsatile; and (2) a man who when first seen had a large rounded tumour in the chest with every appearance of aneurysm, but not pulsatile; nine months later he died suddenly and the post-mortem examination disclosed a cured aortic aneurysm with a secondary dissecting aneurysm in its wall which had caused death by rupture. Mr. Holland pointed out that the pulsatile character of a thoracic shadow as seen by the screen was the real point of importance in the diagnosis of aneurysm by the x rays.—Sir William Banks showed a series of cases illustrating Lymphangiectasis; also a patient with Cervical Rib, causing occlusion of the left subclavian artery and gangrene of the hand, and other cases of pathological interest.

WEST-LONDON MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on April 3rd, Mr. Rickard W. Lloyd, the President, being in the chair.—Mr. J. R. Lunn showed a man, aged 35 years, who had been operated on for Fracture of the Patella by Barker's subcutaneous method a week after the accident. The bone had now joined well and the x rays showed the fragments to be in excellent position, but pain was still complained of.—Mr. F. Swinford Edwards said that he did not consider that the result of this case showed the subcutaneous method to be equal to the open operation. The joint was still swollen and tender and it was doubtful if the union was by bone. He advised removal of the wire, as it was probably maintaining some inflammatory symptoms.—Mr. W. McAdam Eccles thought that the objections to Barker's operation were that the wire passed through the joint and that the torn aponeurosis could not be removed from between the fragments. Consequently bony union in this operation was probably rarely obtained.—Mr. J. G. Pardoe read a paper on the Indications and Methods for the Radical Cure of so-called Hypertrophy of the Prostate. Cases in which operation was indicated might, he said, be either those of urgency or those of expediency. He believed that in cases of urgency the mortality from the operation approached 20 per cent., while in cases of expediency it was from 2 to 4 per cent. He then described some methods of operation by the suprapubic and by the perineal routes. The suprapubic operation was specially suited to the removal of adenomatous prostates and of pedunculated median enlargements, and should probably always be used when the growth was complicated by stone. Mr. Pardoe concluded (1) that something better than catheter life could now be offered to patients; (2) that early operation should be strongly advised, except as a rule in the case of very aged men; and (3) that the operation should be carried out in the aged if the symptoms became urgent from hæmorrhage, cystitis, or increasing difficulty in catheterism.—Mr. Edwards said that all cases of prostatic enlargement were not fitted for extirpation, whether by the suprapubic or perineal route. Vasectomy and castration had their spheres of usefulness and were not attended by so much risk of life, though, at the same time, the relief might not be so thorough or permanent. The benefits conferred by extirpation upon patients who recovered were very great, as they were able to void their urine as well as they did in the prime of life.—Dr. J. E. Squire read a paper on the Modes of Cure and Arrest in Pulmonary Tuberculosis. Arrest or cure of the tuberculous process in the lung might be brought about in each of the three stages—namely, (1) infiltration or consolidation; (2) caseation and softening; and (3) excavation or cavitation. Cure could, however, only be expected in the earlier stages and arrest became less likely the further the tuberculous process had proceeded. As the mode of arrest thus varied according to the stage of the morbid process, treatment, which should aim at assisting nature, must be guided by a study in each case of the tendency of the pathological processes which are taking place in the lung.—Dr. T. N. Kelynack made some remarks, after which the further discussion of Dr. Squire's paper was postponed to a future meeting of the society.

CLINICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on April 21st, Dr. T. Arthur Helme being in the chair.—Dr. C. Christopher Heywood gave a short communication on the Early Diagnosis of Rickets. He said that it was very necessary to be on the look-out for early signs before visible bony changes occurred, for then much suffering and death, not only in children but also in adults, might be avoided. In his opinion every case of rickets was preceded by a gastro-intestinal catarrh, often accompanied by constipation, and this catarrh was usually due to faulty feeding, the result being that toxins were formed in, and absorbed from, the alimentary canal. These toxins acted especially on the nervous system, the first signs of the disease being often muscular twitchings, starting at slight noises, unusual fretfulness, &c., which signs were often overlooked until convulsions, croup, tetany, or laryngismus occurred. A combination of gastro-intestinal and respiratory catarrh was a danger signal which ought to be carefully watched. He mentioned night restlessness and added that in the early stages of rickets children often preferred to lie on their face in bed. Thirst and appetite were often excessive. Muscular tone was lost early. Laxity of ligaments and anæmia were early and often overlooked signs.—Mr. P. R. Cooper mentioned a case of Chronic Abscess of the Occipital Lobe of the Brain with somewhat unusual symptoms. The patient, a male, aged 21 years, had been ailing for two weeks with headache and lassitude. There were no paralysis or loss of muscular tone, no anæsthesia, no altered reflexes, and no want of coördination. Constipation was extreme. The mental condition was undisturbed except for the lethargy and depression. It was noticed that he occasionally had difficulty in grasping with the left hand, but he could easily overcome this by an effort. He died suddenly from syncope and at the necropsy a chronic abscess was found in the right occipital lobe with thickened and unruptured walls. Mr. Cooper laid stress upon the fact illustrated by this case that organic mischief might exist for a long period in one of the most vital organs of the body without giving rise to definite localising symptoms.—Dr. F. Craven Moore read a communication on Acid Dyspepsia and advocated a more systematic examination of the contents of the stomach in gastric disorders which was rendered possible by the use of the stomach tube and the introduction of simple methods of quantitative analysis. As was first pointed out by Riegel acid dyspepsia might be entirely due to the formation in relatively large quantities of the normal acid of the stomach—viz., hydrochloric acid—a condition called hyperchlorhydria; under normal conditions the average quantity of hydrochloric acid in the free state did not amount to more than 0·2 per cent. With an ordinary mixed diet, this acid as it was secreted was at once taken up by the proteid constituents of the food and was held combined in the so-called acid albumin. When, however, all the proteid present had been satisfied, then any further acid remained in a free state in the gastric contents. Under certain conditions the relation became disturbed and the hydrochloric acid was considerably beyond the physiological requirements. In the treatment of acid dyspepsia Dr. Moore advocated the use of a large proportion of fats and proteids and a decrease in starchy food.

MANCHESTER MEDICO-ETHICAL ASSOCIATION.—A meeting of this association was held recently, Dr. D. Lloyd Roberts, the President, being in the chair.—Dr. John Scott read a paper on the Vaccination Act. He said that if efficient vaccination and revaccination of the population were carried out the country would get rid of small-pox. It was essential that a uniform standard of vaccination should be aimed at by every operator. The best vaccination of the country was done by the public vaccinators. The Vaccination Act provided for the payment of public vaccinators and kept up the efficiency of the standard required by a system of bonuses, but it exercised practically no supervision over the work of private vaccinators and therefore the country found itself in the unbusiness-like position of contracting for a certain article, taking vigorous measures in certain cases to see that it was up to standard, but in the majority of cases accepting almost anything without examination. The reasons why the work of the private vaccinator was, as a rule, beneath that of the public vaccinator and why in large towns there was a class of men willing to vaccinate in one place for sixpence were well known, but there was nothing in the Act or in its administration to encourage the private vaccinator. There would be no efficient vaccination until every vaccinator was put on the same level and paid by the same funds. The time was now past for boards of guardians to control vaccination which should at least be put under the control of the sanitary authorities or (counsel of perfection) be constituted a separate department of the State.—Mr. T. W. H. Garstang said that he deprecated handing over the administration of the Act to smaller bodies than boards of guardians; it ought to be a larger body if a change was to be made. Short of a Government department the county

council should be the authority to carry out the administration of this or any future Act. He saw no prospect of any new Vaccination Act for a number of years because of the length of the debate in Parliament likely to arise out of it. When medical questions were under discussion medical men received little consideration at the hands of Members of Parliament.—Dr. Martin said that the proper authority to administer the Vaccination Act was the county council or the county borough council or a central vaccination authority. If a child contracted small-pox after exemption from vaccination under the conscience clause the parent should undergo a term of imprisonment.—Dr. Ritchie said that a good deal of harm that was done by inefficient vaccination would be prevented if a definition of efficient vaccination were laid down and a penalty were incurred if a general practitioner gave a certificate that a case had been efficiently vaccinated and this were false.—Dr. Rayner said that the Vaccination Act ought to be administered by the sanitary authority. The cost of small-pox patients in their union did not fall on the board of guardians. The public body responsible for supplying the money and whose interest it was to keep down the cost and the spread of small-pox was the sanitary authority.—Mr. David Owen said that the proposal to debar the public vaccinator from private practice would very often not be practicable.—Dr. Watkins, Dr. A. W. W. Lea, Dr. E. Vipont Brown, Professor W. J. Sinclair, and others also took part in the discussion.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN.—A meeting of this society was held on April 17th, Dr. Lewis W. Marshall (Nottingham) being in the chair.—Dr. David Walsh showed a case of Ichthyosis Hystrix in a female six and a half years of age. The condition was noticed shortly after birth and occurred on the neck and face. The part on the side of the neck was verrucose and deeply pigmented, while that on the face was in a hypertrophied condition, somewhat like keloid but without warts or pigmentation, and terminated at the middle line.—Mr. George Pernet said that in his opinion the greater part of the growth was of the nature of a white mole; it did not suggest to him keloid and it did not come within the category of warty streaks.—Dr. J. Porter Parkinson showed a case of Dextrocardia in a child, aged six years. The patient was admitted into hospital with rheumatic fever and the condition of the heart was discovered in the course of a physical examination. The heart sounds were natural and there was no other displacement of the viscera.—Dr. George Carpenter showed a case of Scurvy in a female infant, aged nine months, the prominent symptom of which was hæmaturia. The child's gums were spongy, there were no subperiosteal hæmorrhages, and the patient was also rickety. He drew attention to two features in the case—namely, well-marked "snuffles" and extensive craniotabes over the parietal bones. He had frequently called attention to this situation in the skull and not the occipital bone as was taught as being the usual site. Craniotabes was most common during the second, third, and fourth months of life and by the ninth month it was infrequently met with; during the pre-rickety period of life it was a marked feature and when rickets was present craniotabes was found infrequently. He had observed 238 typical cases of craniotabes. There was a difficulty in giving a true value to chronic "snuffles." In some cases congenital adenoids were present, in others they were not, and again in others the posterior nares could not be digitally examined. Some were certainly syphilitic manifestations but about others there was some doubt.—Dr. Edmund Cautley said that he could not agree with Dr. Carpenter that craniotabes was very frequently associated with syphilis. He looked upon craniotabes in many instances as due to errors in diet which later might lead to rickets or other disorders of nutrition.—Dr. G. A. Sutherland said that craniotabes was not nearly so common as had been asserted; he was inclined to believe that it was syphilitic in origin. In his experience, also, the parietal bone was the most frequently affected but in some cases it was singular how generalised the condition was in the skull bones. "Snuffles" was not to be regarded as diagnostic of syphilis.—Dr. Marshall said that children who suffered from "snuffles" were not necessarily syphilitic. Craniotabes was not so common as had been supposed and he did not attribute it to syphilis; malnutrition might induce such a condition.—Dr. Marshall read a paper on cases of Deformity of the Hands and Feet reproduced with singular faithfulness in five succeeding generations. Each hand and foot lacked the distal and middle phalanges and the little and fourth toes were ill-developed.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on April 22nd, Dr. J. M. Munro Kerr, Vice-President, being in the chair.—Dr. Robert Jardine showed a Cyst of the Left Ovary removed from a woman who was at the time five months pregnant. Recovery was delayed till the uterus was emptied after inducing abortion. Recovery was then rapid.—Dr. G. Balfour Marshall reported a case of Precocious Pregnancy in a girl, aged 13 years, in whom menstruation had not commenced. He pointed out that this case showed that ovulation went on apart from menstruation.—Dr. Marshall also described a case of Ruptured Extra-uterine Pregnancy complicating a Twin Intra-uterine Gestation. On the patient's admission to the infirmary an enema had been given by way of preparation for operation. Acute symptoms set in immediately and her condition became very alarming. At the operation the abdomen was found filled with fluid blood and bleeding was going on at the time. The sac was very adherent to the meso-sigmoid and this fact was considered to have accounted for the accession of hæmorrhage after the administration of an enema. A primary rupture had taken place earlier and had coincided with a previous attack of pain, faintness, &c. After removal of the tube and the sac, the oozing from the uterus could not be controlled even by ligature of both ovarian and uterine arteries, so the uterus was removed and the pelvis was packed with iodoform gauze. The patient unfortunately succumbed on the following day and at the necropsy nothing to account for death but the profound anæmia was noted.—Dr. Marshall also described a case of Uterine Inertia occurring during the first stage of labour. This was the patient's third delivery. Her left ovary had been previously removed. The membranes had ruptured early and this event was followed by complete inertia without other symptom. The patient was carefully watched till the fœtal heart gave evidence that it was time to intervene on behalf of the child. The labour was concluded by dilating the cervix with Barnes's bags and the application of the forceps. When the head was born a hypodermic injection of aseptic ergot was given. The uterus contracted well and the placenta was expressed. There had been remarkably little blood lost. The patient was exhausted but not alarmingly so. Dr. Marshall was preparing to leave when the condition of the patient became serious. She suddenly complained of a choking sensation, became very pallid, and the pulse was very rapid; she had the sensation of impending death. Various remedies were administered but without effect, death taking place in about six and a half hours after delivery. The causes of sudden death after labour were enumerated and the one considered to be active in this case was embolism. The other causes could be eliminated. Unfortunately no necropsy had been sanctioned.—Dr. A. MacLennan said that he thought that the cause of death was more likely to be thrombosis in the vena cava or auricle than embolism.

DERMATOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.—A meeting of this society was held on April 22nd, Dr. J. H. Stowers, the President, being in the chair.—Dr. P. S. Abraham showed a Case for Diagnosis. It was regarded by members present as a case of Xerodermia with some Follicular Eczema of the Trunk.—Dr. G. N. Meachen showed a case of Sclerodactylia with Symmetrical Sclerodermia.—Mr. Hartigan showed (for Dr. Abraham) a case that he was inclined to regard as Madura Foot.—Mr. A. Shillitoe showed a Case for Diagnosis, a man presenting a copious ringed eruption on the extremities, the trunk being exempt. It was regarded as an unusual manifestation of Seborrhœa Corporis.—Dr. W. B. Warde showed (for Mr. Waren Tay) a case in which an Ulcer of the Leg followed an attack of Typhoid Fever complicated by Phlebitis of the Veins of the Legs.

GLOUCESTER DISTRICT NURSING SOCIETY.—The annual meeting of this society was held on April 18th under the presidency of the Dean of Gloucester. The report showed that 639 patients had been nursed during 1902, compared with 514 in 1901; that 359 midwifery cases had been attended, against 270 in the previous year; and that a total of 22,754 visits had been paid, compared with 20,037 in 1901. The accounts showed an income of £798 and an expenditure of £802.

Reviews and Notices of Books.

Human Personality and its Survival of Bodily Death. By FREDERIC W. H. MYERS. Two volumes. Vol. i., pp. 770; vol. ii., pp. 669. London: Longmans, Green and Co. 1903. Price 42s. net.

MR. MYERS'S great posthumous work is not one to be rapidly valued or, by a short study, even tasted and enjoyed. Putting the matter at its lowest on a reckoning of mere bulk, we have two volumes, some 1400 closely printed pages, of argument and of evidence. For facts the book contains the selected harvest of the whole work of the Psychical Research Society, guided by Sidgwick, by Edmund Gurney, by Dr. Hodgson, and by Myers himself. For argument and theory we have the deliberate and mature work of a singularly gifted mind, set forth with the perfect lucidity of rare earnestness, often with the eloquence of a poet. The most various opinions will be formed of the value of the evidence for certain conclusions, even of the success with which the chosen tests have been applied. But there can be no doubt of the possession by the late Frederic Myers of a thoroughly scientific spirit, of a method elaborate but always sanely elaborated, and of an energy for investigation directed by a certain open-eyed optimism which is of high value for its own sake. So almost certain is Mr. Myers of the approach of an experimental knowledge of life beyond the grave, which shall render religion continuous and part of one evolutive series with physical science, that he can even half regret the passing of our age of twilight. "I confess, indeed," he writes (vol. ii., p. 280), "that I have often felt as though this present age were even unduly favoured; as though no future revelation and calm could equal the joy of this great struggle from doubt into certainty; from the materialism or agnosticism which accompany the first advance of Science into the deeper scientific conviction that there is a deathless soul in man. I can imagine no other crisis of such deep delight."

To revert from the Epilogue in which these words occur, or from any one of the closely reasoned chapters, to a page chosen at hazard in the *pièces justificatives*, is to experience a shock of disappointment. The disparity of tone is too striking at first sight, though the relations of fact are often of high interest. We must attempt, for the most provisional judgment, to set the various matters in an order, an evolutionary order if possible, such as the author would always desire, so that what is weak may appear in line with what is strong. The arrangement of the book affords every possible facility for reference, each short section of the discussion matching by numbers a corresponding section of the appendices in which the records of phenomena are stored. What, then, does Mr. Myers set out to show? It is the persistence of human personality after what he calls the shock of bodily death; and he seeks the proof of this in certain experiences of the living. These are, first, phantasms of the dead—that is, impressions upon the senses of sight, hearing, or otherwise, traceable, according to a highly elaborate and critical research, to the continued and present energy of dead persons. For proof of this continued energy it is not necessary to believe "that the phantom seen [or heard or felt], though it be somehow *caused* by a deceased person, *is* that deceased person, in any ordinary sense of the word." The analogy of phantoms of the living is used to show that the "ghost" need not be, even must not be, thought of as "a *revenant* coming back amongst living men"; it is an effect produced in the recipient by the persistent energy of the deceased personality. It is a great thing to have parted with the use of the words "subjective" and "objective" as if they were mutually exclusive in their reference to a given fact of experience. The question to be raised is whether a given state of the percipient subject is connected or not in some way with a certain existence which is not the subject—namely, a deceased person. Phantasms or sensory automatisms—to name them as they are in the recipient person—compose the first class of evidence. The next is found in motor automatisms—that is, *actions* induced in the recipient in such a way as to constitute or to suggest a connexion with the deceased. These include the well-known phenomena of automatic writing, with or without planchette, spirit-drawing, table-tilting (for which the physical force is provided by the "recipients"), impulses, whether motor or inhibitory, and various perturbations of the actions of living men which, if the crucial point is to be made, must be traced to a connexion of some kind between living and dead. Lastly, there is the state of trance, possession, and ecstacy in which the living person is held to become the channel of direct expression—for information or for action—of the "discarnate" spirit.

In order to disentangle from the mass of well-proved phenomena those which may serve for evidence of discarnate action Mr. Myers has elaborated, as we have said, a delicate system of tests. The time-relation must be ascertained; the appearance must be truly later than the death or it falls into the class of the phantasms of the living. Previous knowledge of the subject must be excluded if a message is to have veridical value. The possibility of the persistence of a latent impression planted by a living person but emerging after his death in the survivor must be measured and allowed for. We must be content to say that this and much else are attempted, at least upon an exact system. Of a higher, or, at least, a more general, importance than all this is the investigation of man's ordinary mental life which precedes the special inquiry. Of old, the alleged appearance of a ghost met with a choice of three interpretations. It might be a "real" ghost; it might be the invention of deceit, voluntary or involuntary, practised by or upon the narrator; or it might be the production of "fancy," under which name could be included everything from a supposed uncaused hallucination to a misreading of genuine sense impressions. But now it is precisely to the word "hallucination" that the name genuine must be attached, instead of the impossible word "uncaused." What creates or produces conditions suitable to the occurrence of hallucinations? And, again, what is the meaning of abnormal states, for they also have a meaning; and what is the meaning of delusions? In order to approach these questions an immense work of analysis of consciousness has been undertaken and pushed far. And if we may state briefly our present provisional judgment of Mr. Myers's book, it is that it possesses a very high degree of solid value precisely as a work of analytical psychology, as an exploration of that subliminal region of the mind. This region is below the usual level of consciousness in which, as Mr. Myers conceived and goes far to show, arise and are received those mental movements which constitute unusual communications in the first place betwee living persons. The conception which we owe to Mr. Myers of the subliminal consciousness is one which for those who seek in special phenomena the proof of immortality cuts, in the common phrase, both ways. It renders much more stringent the requirements of that proof of previous ignorance which is necessary to establish a veridical message. An appearance or a hearing may be totally unexpected by the recipient when we reckon only his conscious expectation. It may nevertheless have risen into his observation from that region below the usual threshold of consciousness in which he receives and stores informations which have never awakened his attention. The old simple assertion, "I had no previous knowledge, no 'expectant attention,'" is outflanked by the possibility of an unconscious possession of

facts or impulses capable of emerging into knowledge or into movement in such a way as to create the impression of unforeseen information or externally controlled action. On the other hand, the subliminal region, which is thus a new door for error, also presents itself as opening a new possibility of real communications. It is the region in which telepathic influences, if such there be, would be received.

It is impossible to represent even in the barest outline the course of the extremely interesting inquiry which is thus suggested and which, with its evidence and illustrations, fills Mr. Myers's first volume. We will only name as of special value the distinction here made between genius, which enlists the largest possible range of mental life within the sphere of conscious thought and effort, and hysteria which throws into the grasp of the subconscious or unconscious what ought to be conscious and voluntary. The great man is he who rescues most from his unconscious store. Here and in a score of other questions Mr. Myers shows himself afresh, in this rare legacy of a strenuous life, to be a thinker of great independence and power. However some may hesitate before the proofs of immortality which he in no unjudicial spirit presents, all psychologists will recognise the force, and in many respects the complete originality, of the investigation which tends to show that behind all the complex of faculties which we roughly call the mind there exists a central coördinating power persistent through the changes of mental growth, the hidden focus or root of personality. We have read the book with the deepest interest and recommend it to all our readers whose mental habits lead them to ponder over the great problems of psychology. It does not require subscription to Mr. Myers's well-known views to appreciate the honesty and the brilliant thinking of Mr. Myers's great work.

Modern School Buildings: Elementary and Secondary. By FELIX CLAY, B.A. With nearly 400 Illustrations, comprising the plans of 85 schools and numerous figures of details and fittings. London: B. T. Batsford. 1902. Pp. 459. Price 25*s*.

OUR first impression on examining Mr. Clay's "Modern School Buildings" was that it was hardly a work which came within the province of a medical reviewer. A closer examination, however, convinced us that this volume was so intimately concerned with matters affecting school and personal hygiene and questions with regard to which medical men are frequently called upon to express an opinion that it was as fully entitled to a review in THE LANCET as to one in a journal confined to architecture. Of its merits as a systematic work on the architectural designs of school buildings we are unqualified to express an opinion; this side of the question may be left to those who possess the requisite technical knowledge. We imagine, however, from the general thoroughness of method which characterises those parts of the volume which come within our province that those sections which deal with architectural questions will prove of the greatest value, not only to those who have to design the plans of school buildings but to those also who require authoritative assistance in adjudicating on their merits. The plans of 85 schools are given, 14 of these being in Germany and eight in America, while 63 represent the best types of modern English schools, including day- and boarding-schools both for boys and girls, kindergartens, infant schools, training colleges, pupil teachers' schools, and, in fact, every type of educational institution for the training of the young.

A distinguishing feature of Mr. Clay's book is that throughout the entire work practical considerations of efficient administration, economy, hygiene, and comfort for the scholars appear to weigh equally with the æsthetics and traditions of architecture pure and simple, a method of handling the subject which will prove of immense advantage to those who refer to this volume for practical instruction in the efficient designing of school buildings. As an active member of the council which controls a large number of most successful secondary day-schools for girls the author has had unusual opportunities of studying the practical side of school administration and of acquainting himself with the failings and shortcomings of buildings which are in actual use. In his preface he modestly disavows any attempt to suggest the lines upon which an ideal school building should be built. He confesses his object to be to assist the reader to formulate an intelligent judgment by means of practical illustration of existing buildings and by critical review of their advantages from practical experience. The scope of the work includes both elementary and secondary schools, though more space and attention have been devoted to the latter for the reason that, in the author's opinion, it is more desirable that the methods of secondary school buildings should find their way into the elementary schools than that the reverse process should initiate reforms.

With this brief review of the general design of the work we may turn to those portions of the book with which medical readers will be more closely concerned—namely, to those sections which deal with the lighting, warming, and ventilation of school buildings and to those parts which deal with questions affecting the health of the scholars. It is probably no hyperbole of statement to say that the success of a school, educationally as well as physically, is dependent in a large degree upon the efficient heating and ventilation of the building in which the scholars spend their time, and it is with a full appreciation of this truth that Mr. Clay approaches this side of his subject. With regard to ventilation he remarks: "A great step will have been gained when it is more fully recognised that although there may be some risk in open there is undoubtedly more in shut windows, unless some other means for the provision of fresh air are provided." Popular beliefs in the danger of the open window and the almost instinctive dread of currents of fresh air which, even at the present day, seem to inspire a very large section of the public, have refused to yield to the arguments of sanitarians or to the evidence of actual demonstration. In vain half a century ago did Rawlinson smash every pane of glass in that historical pesthouse which passed as a hospital for the wounded during the Crimean war and even at the present day the open-air treatment of pulmonary tuberculosis appears to convey no other lesson than that it is useful for the special treatment of consumptive patients.

It is to be anticipated that Mr. Clay's book, exercising, as it is certain to do, an authoritative influence on the sanitation and hygiene of future school buildings, will bear abundant fruit in the improvement of the standard of health of the rising generation of school children. On the subject of the size of the room both in the case of dormitories and of class-rooms Mr. Clay insists that one of the commonest fallacies in regard to ventilation is that a high room is necessarily better ventilated than a low one and that if the requisite amount of cubic space is secured by liberality in height the desired end will be satisfactorily secured. "As a matter of fact," he continues, "this is not in any degree the case; the additional height that is often provided in class-rooms, while considerably increasing the cost of the building and the length of the stairs, is, as far as ventilation is concerned, not only a complete waste of space but a considerable addition to the difficulty of both warming and ventilating the room." With regard to different methods of ventilation, although the author is careful not to commit himself unreservedly to any one plan or system, his criticisms on certain of the methods in common use, and especially on those which are based on the principle of the admission of downward currents of warm air, should be extremely useful

to those who have to make up their minds as to what system to adopt in any proposed buildings. With regard to the system of the admission of downward currents of air which are for the joint purposes of ventilation and warming the author makes some very pertinent criticisms. He remarks that if air enters from above and is to be utilised for the purposes of warming, the temperature of the in-coming air must be raised above that which obtains on the walls and solid surroundings. Hot air of such a temperature must have a distinctly injurious effect on those on whom it impinges and practical experience proves that it is exceedingly unpleasant to those who are exposed to it. Baths, lavatories, and other sanitary arrangements suitable for almost every variety of building are described from the same practical point of view. As regards the provision of baths for secondary boarding-schools it is suggested that a modified form of the spray bath as used in German and American elementary schools might prove both economical and practical, since such a method would enable a very large number of scholars to take a bath in a comparatively short space of time. This strikes us as a reasonable solution of a difficult and ever-recurring problem. The moral and educational value of the bath and the self-respect which habits of personal cleanliness engender among all classes, and especially among the lower orders, are arguments which the author considers should not be forgotten when the expense of providing bathing accommodation for elementary schools comes under the consideration of those who are responsible for the expenditure of the rates. As a standard work on the subject of school buildings this important compilation owes no little of its value to the special care which has been bestowed on questions which are usually considered to be no part of the architect's business. For instance, we notice that a section is devoted to the subject of "provision for games" and in this is supplied a table giving the regulation dimensions and the space required for cricket, football, lacrosse, rounders, tennis, and basket ball, while plans are provided for the building of fives-courts and gymnasiums.

As we have already indicated, "Modern School Buildings" is essentially a practical work. It is written at least as much from the teachers' and students' point of view as from the architect's. The health and comfort of the teachers as well as of the scholars have clearly been considerations of primary importance and if from the architectural standpoint Mr. Clay's work is as sound and up to date as it is with regard to sanitation, hygiene, and administration it will inevitably be accepted on all hands as a standard work of reference. As an indication of the completeness with which this volume has been brought up to date we notice that in the appendix the rules of the Board of Education to be observed in the planning and fitting up of public elementary schools as revised and issued in November, 1902, are given *in extenso*, although at the time of the issue of these regulations the book itself must have been in the printer's hands.

The Refraction of the Eye and the Anomalies of the Ocular Muscles. By E. KENNETH CAMPBELL, M.B. Edin., Surgeon to the Western Ophthalmic Hospital; Surgeon Oculist to His Highness the Maharajah and Gaekwar of Baroda. London: Baillière, Tindall, and Cox. 1903. 8vo, pp. 214. Price 5*s*.

The Errors of Accommodation and Refraction of the Eye and their Treatment: a Handbook for Students. By ERNEST CLARKE, M.D. Lond., F.R.C.S., Surgeon to the Central London Ophthalmic Hospital. London: Baillière, Tindall, and Cox. 1903. Pp. 225, with numerous illustrations and one (removeable) card of test-types. Price 5*s*. net.

THERE is no part of the subject of ophthalmology that has made greater advances during the last half-century than that of the refraction of the eye and the errors and defects to which it is liable, there is none that has a wider application, and none in which the treatment, founded on mathematical data, has proved more beneficial to a large number of persons. Fifty years have scarcely elapsed since defects of vision dependent on errors of refraction were supposed to be diagnosed and to receive appropriate treatment by the patient being tested with half a dozen pairs of concave and convex glasses from which he selected a pair that caused some improvement. If these proved useless he was compelled, if hypermetropic, to forego reading and work on any near objects, which often meant loss of occupation. Astigmatism was unknown, and consequently no attempts at relief by means of glasses were made and the symptoms if they became prominent, being wrongly diagnosed, were wrongly treated. Now, however, all this is changed. Numerous concise treatises have been written, chiefly by men engaged in the active pursuit and daily work of ophthalmic practice and, as a general rule, also occupied in teaching the younger members of the profession.

The two works before us are typical specimens of this class of manual. Both are founded, as far as optics are concerned, on the classical treatises of Donders, von Gräfe, and Landolt, and in regard to the anomalies of the ocular muscles upon the careful researches of the same writers and upon those of Stevens and other American surgeons who have worked at this subject with remarkable persistence and success. The optics of the eye do not admit of any great novelty in the mode in which they can be presented to the student. The laws of refraction of light in spherical and cylindrical lenses, the nature of prisms, the formation of retinal images and their size, the mode of testing vision, the nature of accommodation and convergence, and the nature and use of the ophthalmoscope must be given in nearly the same terms by every writer. We have compared many passages in both works and find little to choose between them. Both are clearly written and both give the student all the information which, if seconded by the practice of a large dispensary or general hospital or, better still, of an ophthalmic hospital, will enable him to treat successfully the refraction cases that he meets with.

Mr. Kenneth Campbell treats the subject of the determination of the refraction by means of the ophthalmoscope very concisely and clearly. Thus, in speaking of the indirect method, the following directions are given:—"Focus the disc accurately and then slowly withdraw the objective, then: (*a*) if disc remains of same size and shape there is emmetropia; (*b*) if disc increases in size and retains its shape there is myopia; (*c*) if disc decreases in size and retains its shape there is hypermetropia; (*d*) if disc alters in shape there is astigmatism; (*e*) if there is decrease in size in one diameter alone there is simple hypermetropic astigmatism; (*f*) if decrease in size in all diameters, but unequally so, there is compound hypermetropic astigmatism; (*g*) if increase in size in one diameter alone there is simple myopic astigmatism; (*h*) if increase in size in all diameters, but unequally so, there is compound myopic astigmatism; (*i*) if decrease in one diameter and increase in size in the one at right angles to it there is mixed astigmatism." Such a brief conspectus of the appearances presented is very useful, as it leads the student to observe with care and enables him at the same time to draw important inferences, to be checked by further examination by the direct method and by retinoscopy. The same facts, more diffusely stated, and with some additional details, are given by Mr. Ernest Clarke. The symptoms and diagnosis of myopia are particularly well given by Mr. Clarke who has included the general symptoms of myopia in 11 paragraphs too long to quote.

There was, as is well known, a difference of opinion in regard to giving full correction in myopia by means of glasses, but both authors are decided in their view that

glasses completely neutralising the myopia should be used. Mr. Clarke speaking of myopia in early youth, after advocating the use of atropine in order that the full error may be estimated, holds that the full correction should be ordered and weaker glasses should never be given, the patient being strictly enjoined to wear the glasses always. Mr. Campbell makes a slight but reasonable reservation, observing that if the patient is young and the accommodation good the eye in myopia up to about 6 D. should be made artificially emmetropic by prescribing the full correction for all purposes. If, however, the power of accommodation is weak glasses of less strength must be ordered for near work but the full correction for distance.

In regard to the disputed point whether in cases of amblyopia associated with anisometropia any improvement can be effected in the eye that is the more defective one of the two Mr. Campbell only remarks that "it is sometimes well to attempt the education of it by instructing the patient to practise using it, the other eye being meanwhile excluded from use." Mr. Clarke seems to be more hopeful, for he says that "in amblyopia exanopsia occurring in patients with internal strabismus" after appropriate correction, the better eye of the two being excluded by a bandage, the patient perseverance in the use of the worse eye has sometimes a most satisfactory result. He has seen "the vision improved in many cases from $\frac{6}{60}$ to $\frac{6}{6}$ in six months."

We have said enough to show that each of the treatises mentioned above constitutes a trustworthy guide for the student or the practitioner and will enable him thoroughly to understand the principles on which errors of refraction and defects of the ocular muscles should be treated. It is somewhat remarkable that in neither of the works is there any account of the cerebral areas which are connected with vision, a knowledge of which is so important in determining the etiology of the paresis or paralysis of the different ocular muscles.

LIBRARY TABLE.

Scientific Phrenology, being a Practical Mental Science and Guide to Human Character. An Illustrated Text-book. By BERNARD HOLLÄNDER, M.D. Freiburg, author of the "Mental Functions of the Brain." With over 100 Illustrations. London: Grant Richards. 1902. Pp. 307. Price 6*s.*—Dr. Holländer says that his book on the "Mental Functions of the Brain," which has been already reviewed in THE LANCET,[1] has revived interest in Gall's discoveries and has led to many requests for a text-book of a scientific phrenology written in the light of modern research. In answer to this demand he presents this volume. He states that his system has no connexion with the "bump theory" and that the observations which he has recorded are so simple that anyone can repeat them, and he believes that the theories which he advances furnish a key to human character and thus make it possible to apply exact knowledge to the education of the young and to the successful treatment of the criminal and of the insane. The book is written for a popular audience, as might be guessed from what we have already said, while it is stated on the wrapper which covers it that "no special technical knowledge is required to test the author's deductions and observations." Again, after referring to the manifestation of certain unsavoury symptoms and the connexion between them and the development of the cerebellum, and after quoting in detail a case to the point, the author remarks: "This is not the place for going fully into the question, which is one for physicians only." Later he remarks, with doubtful modesty: "Through my persistent labours the medical profession has been enlightened as to the brilliant anatomical discoveries of Gall." Now this is the sort of thing that ought not to be said in a book appealing to the public, for it may be taken as accurate, which it is not. Dr. Holländer gives an illustration of the way in which "an inspection and scientific measurement of the head" are of practical value. The case, taken from the writer's notebook, is that of D. M. S., who was two and a half years old when the description was written. The author, guided only by what he could discover of the brain organisation, inferred that the patient would show "uncommon intellectual abilities," would "make a good scholar," would "show a logical tendency," would "shine as a critic," and would "realise the hopes of his friends and justify as he advances in years their earlier expectations." Scientific phrenology seems to lead to a pretty knack of prophecy, but we fear that the medical profession, though taught by Dr. Holländer how to regard Gall, will still withhold their support.

[1] THE LANCET, Oct. 19th, 1901, p. 1051.

Wild Oats: A Sermon in Rhyme. By MAURICE C. HIME, M.A., LL.D. London: J. and A. Churchill. 1903. Pp. 50. Price 1*s.* net.—This is a very little book—for exclusive of preface, synopsis, dedication, notes, and press notices we have but 16 pages of text—and is well described by the author as a sermon in rhyme. He takes as his text the unrelenting Mosaic aphorism, "Ye have sinned against the Lord; and be sure your sin will find you out," and he would prove the accuracy of this text by showing that the sower of "wild oats" will himself inevitably be punished in this world. Undoubtedly to a class of mind—not, we think, the finest class—the fact that certain acts bring punishment in this world would act as a deterrent in a way that no dread of possible punishment in the future could do. Dr. Hime is a man of great honour in his profession as a schoolmaster and naturally, we think, regards the whole matter rather from the schoolmaster's point of view; there are rules and whoever infringes them will be punished. Now no great amount of cynicism is required to see that the sensual sinner is not invariably punished in this world. For some reason or other Dr. Hime seems to think that this view is atheistic, but, after all, it was the view of that most human, loveable, and devout of all the Hebraic heroes—David. We have nothing, however, but commendation for Dr. Hime's eloquent and strongly-worded little sermon, for all medical men know that much suffering would be avoided if the sins of hot youth were not so wholly condoned by society.

Analytical Records
FROM
THE LANCET LABORATORY.

(1) SPEY ROYAL WHISKY; AND (2) CHÂTEAU LOUDENNE CLARET.

(W. AND A. GILBEY, PANTHEON, OXFORD-STREET, LONDON, W.)

1. OUR analysis of Spey Royal whisky furnishes results which are quite consistent with the statement that it is "a blend of choice Highland whiskies all guaranteed pure malt and is of an average age of ten years." The analysis, in fact, is typical of an all-malt spirit of the average age represented. The results were as follows: extractives, 0·36 per cent.; alcohol, by weight 41·30 per cent., by volume 48·75 per cent., equal to proof spirit 85·43 per cent. As regard secondary products, from the nature and amount of which the genuineness of the whisky may be to some extent determined, the following were the results expressed in grammes per hectolitre of alcohol present: acidity reckoned as acetic acid, 72·36; aldehyde, 40·20; furfural, 3·33; ethers reckoned as ethyl acetate, 76·05; and higher alcohols, 261·30. Age is clearly indicated in the figures

relating to acidity, aldehyde, and furfural, the last being considerably lower than in raw whisky. The amounts of ethers and higher alcohols are typical of a genuine pot-still whisky. The spirit is matured and is satisfactory to the taste, possessing a pleasant and delicate malty flavour. We strongly approve of the plan adopted by this firm of distillers, that is, of stating exactly upon the label of the bottle the material from which it is made. Our analyses establish the *bona fides* of this guarantee and indicate a well-matured spirit. 2. Château Loudenne claret is grown in one of the finest districts in the Médoc. It is a delicate non-acid wine with excellent bouquet. Our analysis gave the following results: alcohol, by weight 10·08 per cent., by volume 12·49 per cent., equal to proof spirit 21·89 per cent.; volatile ethers equal to alcohol, 0·16 gramme per litre; fixed ethers equal to alcohol, 0·25 per litre; extractives, 2·15 per cent; mineral matter, 0·27 per cent.; volatile acidity, reckoned as acetic acid, 0·072 per cent.; fixed acids, reckoned as tartaric acid, 0·187 per cent.; and sugar, 0·15 per cent. It will be seen from the results that the wine is practically free from sugar and acidity. It is an excellent type of claret and a very suitable light dinner wine.

MEDICATED SOAPS.

(ARMOUR AND CO., CHICAGO; LONDON AGENCY, 8 AND 9, KING-STREET, SNOW-HILL, LONDON, E.C.)

We have examined three specimens of soap described as medicinal tar soap, medicinal sulphur soap, and medicinal carbolic soap. The first is dark-brown in colour with a strong but agreeable smell of wood tar, the second is yellow in colour owing to the sulphur present, while the third is opaque and quite white. We could trace no objectionable constituents; the soap basis is evidently of the purest kind and the ingredients are well balanced.

PAVOT'S PURE STERILISED CREAM.

(DR. PAVOT, VENDEGIES-AU-BOIS, NORD, FRANCE. AGENCY: MR. L. CUVELLIER, 31, KING EDWARD-ROAD, SOUTH HACKNEY, LONDON, N.E.)

This cream, according to our examination, is carefully prepared and sterilised. Moreover, it is of good quality as will be seen from the following results of analysis: fat, 41·60 per cent.; curd, 4·54 per cent.; mineral matter, 0·50 per cent; and moisture, 53·36 per cent. The cream keeps perfectly in the tin and is fresh to the taste even two days after opening. The flavour is good and equal to that of fresh cream and gives no evidence of any special process of treatment.

CONSOMMÉ (FOR INVALIDS).

(TH. MARQUIS ET CIE, 74, TOTTENHAM-COURT-ROAD, LONDON, W.)

On analysis this preparation proved to contain only 7·4 per cent. of solid matter, of which the mineral matter amounted to 0·83 per cent., the rest being moisture. The consommé consists of thin jelly and contains gelatin and extractives. The flavour is decidedly satisfactory and appetising. The consommé may thus serve to help the invalid in some measure, but necessarily its nutritive value is very low.

CIGARS (FREE FROM ARSENIC).

(THE BRITISH AND AMERICAN CIGAR MANUFACTURING CO., 34, LEADENHALL-STREET, LONDON, E.C.)

The statement has reached us more than once that tobacco leaf occasionally contains arsenic, but we have never been able to substantiate it. There is, however, reference to the presence of arsenic in the tobacco smoked in New Zealand, which is obtained from the United States, in a paper on New Zealand Cancer Statistics in the *Polyclinic* for August, 1902, and in the same number of that journal Mr. Jonathan Hutchinson discusses the question of arsenic cancer and arsenic in tobacco. Of course, a source of arsenic in tobacco might be added glucose or arsenic might possibly be derived from the soil having been treated with impure superphosphate. We have carefully submitted the cigars sent to us by the above company to a series of tests for the most minute amount of arsenic, but in no instance was there the slightest evidence of the presence of this poisonous metal. The tobacco is of excellent quality and in good condition, yielding, when smoked, a pleasing aroma.

FERRATOL.

(W. K. HARRISON, 25, HYDE PARK-ROAD, LEEDS.)

Ferratol is a well-made, perfectly uniform emulsion of cod-liver oil, hypophosphates, yelk of egg, and iron, the last being present in a well known assimilable form. The emulsion is fairly permanent. The formula is an excellent one.

MAGNA CIDER.

(THE MAGNA CIDER COMPANY; AGENTS, CALLARD AND CO., 65, REGENT-STREET, LONDON, W.)

Two varieties of cider were submitted to us, one sweet and the other "dry." The former gave the following results on analysis: extractives, 10·16 per cent.; mineral matter, 0·28 per cent.; sugar, 7·70 per cent.; fixed acids, calculated as malic acid, 0·39 per cent.; volatile acids, calculated as acetic acid, 0·126 per cent.; alcohol, by weight 4·0 per cent., by volume 5·0 per cent., equal to proof spirit 8·77 per cent. This cider is somewhat full and sweet to the taste, but was in quite sound condition. The sample was clear and bright and there was no sediment in the bottle. The sample described as "dry" gave the following results on analysis: extractives, 2·42 per cent.; mineral matter, 0·25 per cent.; sugar, 0·96 per cent.; fixed acid, calculated as malic acid, 0·33 per cent.; volatile acid, calculated as acetic acid, 0·162 per cent.; alcohol, by weight 5·25 per cent., by volume 6·55 per cent., equal to proof spirit 11·49 per cent. This specimen is accurately described as "dry" and possesses the very agreeable and delicate flavour of the apple. The sample was perfectly bright in the bottle and without sediment. Both specimens are evidently genuine fermented juice of the apple and we failed to find any trace of added preservatives.

SPECIAL BREAD.

(JOHN M. MITCHELL AND CO., 33, HOPE-STREET, GLASGOW.)

This bread is registered under the name of "La Nu Lofe" and is a brown bread of excellent texture and taste. The bread readily yields to the processes of digestion, the starch being thoroughly cooked. Cold water dissolved as much as 14 per cent. by weight of the bread, which represents a very fair proportion of soluble carbohydrates. The mineral matter amounted to 1·88 per cent., which is decidedly higher than that usually contained in the ordinary white loaf.

SUGAR-FREE LAGER BEER.

(HARVEY AND CO., PELLON BREWERY, HALIFAX.)

The description "sugar-free" according to our analysis is correct or at any rate the amount of copper-reducing substances is certainly within one-fifth per cent. Analysis gave the following results: alcohol, by weight 3·41 per cent., by volume 4·27 per cent., equal to proof spirit 7·49 per cent.; extractives, 0·56 per cent.; and mineral matter, 0·05 per cent. The beer is of an agreeable light character and has a delicate bitter and malty taste. It affords a wholesome beverage which is suitable for special cases.

MOSELEY'S FOOD.

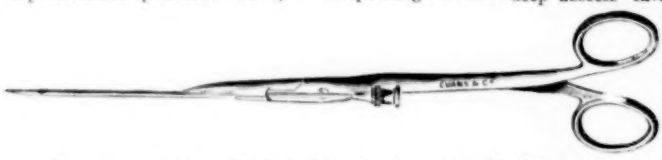
(MOSELEY'S FOOD LIMITED, STOCKPORT.)

The composition of this food is easily revealed by microscopical examination which also shows that it has been carefully treated in order to render the cereal constituents easily assimilable. Its special dietetic value rests upon this fact. The preparation yields a comparatively large proportion of its substance to cold water.

New Inventions.

A NEW FORCEPS.

Mr. Francis Woore has devised a new forceps for use in deep abdominal operations. He says: "In operating on cases of abscess of the liver I have found great difficulty when the abscess cavity has been discovered by means of the needle aspirator in removing the needle and enlarging the opening of the abscess. To run an ordinary pair of forceps along the needle is the usual method of procedure when the abscess is deep-seated but it very often leads to failure. The forceps which I have devised has two grooved pieces of metal attached to each blade in such a way that when the blades are closed the two grooves make a little channel which encircles the needle without grasping it firmly; in that way the forceps can be run down the needle, using the needle as a director, and so be made to penetrate the deep abscess cavity. The blades can then be opened wide and withdrawn in the ordinary way. The illustration shows that there is a bend in the forceps in which the head of the needle can lie, so that when it is grasped the needle and the forceps are in a straight line. The instruments have been made for me by Messrs. Evans and Wormull of 31, Stamford-street, London, S.E." Mr. Woore has inclosed for our inspection specimens of his forceps in two sizes and we quite see that they possess the advantages which he claims for them. By their use a little mechanical difficulty that often occurs is obviated.



View of forceps in the position it should occupy when entering the abscess cavity.

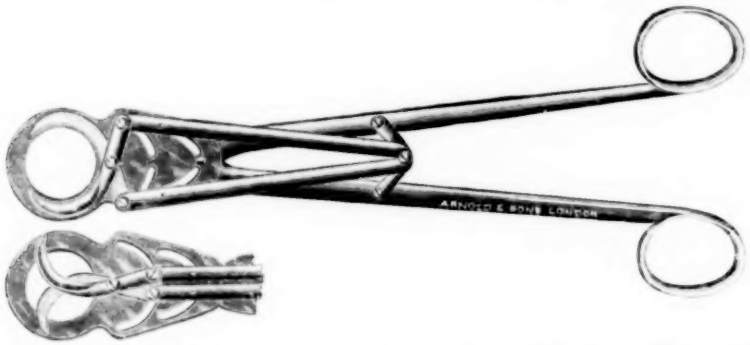
NEW OVARIOTOMY TROCAR.

Messrs. Arnold and Sons of West Smithfield, London, E.C., have made for me the ovariotomy trocar shown in the illustration. It consists merely of two tubes, one of which is pointed like the ordinary Spencer Wells trocar and the other is blunt. They slide over one another just as in the old-fashioned trocar but there is no bayonet joint and the tubes are perfectly straight so that they are easier to manipulate, simpler, and easy to clean. I find it for these reasons a great improvement on the older and more complicated variety.

Harley-street, W. W. BRUCE CLARKE, M.B. Oxon., F.R.C.S. Eng.

THE TONSILLSECTOR.

IN the removal of enlarged tonsils some surgeons advocate the use of the probe-pointed bistoury, but this procedure involves a great amount of skill and dexterity and is not unattended with the risk of accidentally wounding the internal carotid artery or the ascending pharyngeal branch of the external carotid. The guillotine, no doubt, is free from the danger of injuring these structures, but it requires the use of both hands to manipulate and usually the aid of an assistant to press the tonsil into the instrument from the outside; the tonsil must be suddenly cut off with a quick, snapping movement, and if the aim be missed, or an insufficient portion excised, the guillotine must be removed from the mouth, opened, and reapplied, thereby disconcerting both operator and patient. The same objections apply to the tonsillotome, but they are completely avoided in my tonsill-sector, the novel feature of which consists in the action of circular scissor blades, moving inside a circular guarding ring. Here, two cutting blades are at work at the same time; the operation can be done deliberately and quietly; the moment the blades bite, the tonsil is fixed and exactly as much or as little of its substance can be removed as is desired. There is no sudden thrust. If it seems necessary to make another cutting, the instrument (which is manipulated by one hand alone) being kept *in situ*, the blades can be quietly opened and again put into operation, or as often as desired. It can be applied with equal ease to either side. It is exceedingly simple in construction and can be taken to pieces for cleaning. The accompanying illustrations show the instrument open and closed. I am aware that attempts have been made before to employ the cutting action of scissor blades, which no doubt is the best, but the difficulty of completely guarding the action inside a protecting ring has never been successfully worked out before. It is an advantage to seize the tonsil with a small vulsellum after placing the instrument in position; this steadies the tonsil and the excised portion is thus prevented from dropping back into the pharynx and can be easily removed from the mouth. The instrument is made by Messrs. Arnold and Sons, of West Smithfield, London, E.C.



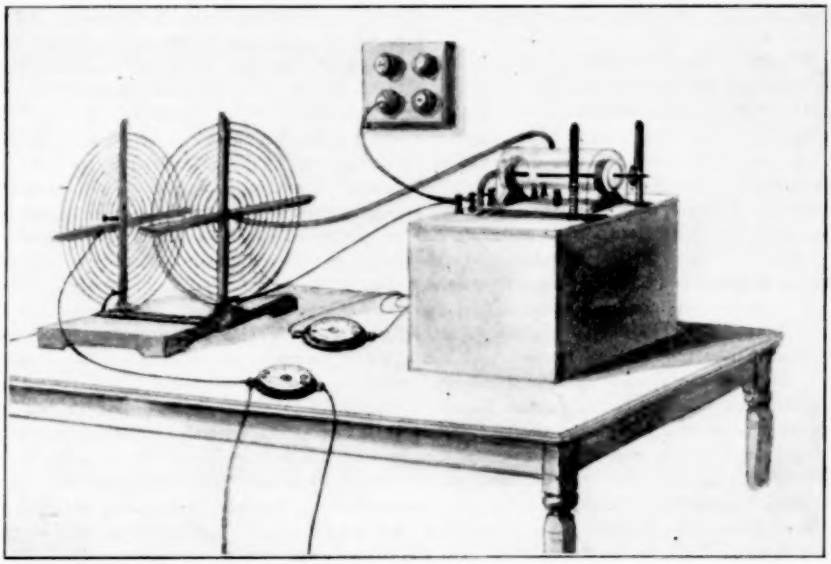
ARTHUR BAILIE FRANCIS, L.R.C.P., L.R.C.S. Edin.

Carrickfergus.

A NEW APPARATUS FOR THE PRODUCTION OF HIGH-FREQUENCY CURRENTS.

WE have received from Dr. J. Cunningham Bowie of Cardiff an account of an apparatus which he has designed for the production of high-frequency currents. Our correspondent claims that his apparatus presents certain points which are new—namely, that he can vary the frequency or rate of oscillation within the wide range of from 3000 a minute to 80,000 a second; secondly, he describes his apparatus as providing currents of high frequency and low potential (from 40 to 100 volts) in distinction from the more usual currents of high frequency and high potential, and he regards this as an advantage in certain cases. Moreover, he is of opinion that his method gives a higher magnitude of current (ampèrage) than the forms of apparatus in common use and says that it is capable of working up to the following ampèrage: weak current, up to 100 milliampères; medium current, up to 1000 milliampères; and strong current, from two to three ampères. The apparatus consists of a step-up transformer, a condenser (both oil-immersed), and a spark gap. The condenser armatures are connected by a helix in the usual way except that the helix is flat. A second helix like the first one acts as a secondary coil and supplies the currents which are led to the patient. The secondary helix is so arranged that it can be made to slide nearer to or farther from the primary; thus the voltage in the secondary can be varied. The frequency rate is varied by varying the capacity of the condenser according to a well-known law determining the rate of oscillation of condenser discharges, and this variation of the capacity is arranged for very simply by a device for sliding the condenser plates to or from each other.

Dr. Bowie writes as follows: "This apparatus is designed with the object of giving to the body a large ampèrage at a low voltage with an exceptionally high frequency. ..... In a tuberculous lung the ohm resistance varies and the application of a high voltage with a high ampèrage and high frequency causes considerable pain and in some instances even hæmorrhage. But with my apparatus experience has proved that with the highest possible frequency and the highest possible ampèrage with a regulated voltage the patient can be brought under the influence of electricity for from 10 to 15 minutes at one sitting without the slightest risk. ..... In consumptive cases alone I have already applied the treatment in conjunction with intra-laryngeal injections of antiseptics with the most satisfactory results."

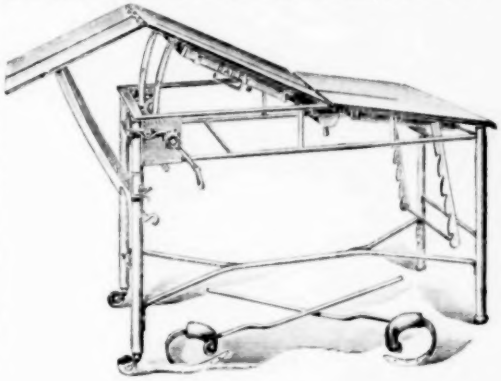


A diagram of the complete apparatus.

ASEPTIC HOSPITAL FURNITURE.

MESSRS. W. H. BAILEY AND SON of Oxford-street and Rathbone-place, London, W., have recently added to their well-known enamelled iron hospital furniture some appliances of distinct merit, including ward tables, dressing wagons, lockers with glass tops, instrument cases, post-mortem trolleys, operation tables, and wash-stands. In the two last-mentioned classes of appliances "the special registered general operation table" and a wash-stand for the use of surgeons, physicians, and others are worthy of special attention. An important feature of the table, of which we give an illustration, is the hot-water tanks. These are so fixed that they are simultaneously elevated with the table top whenever it may be necessary to alter its position. By this arrangement the temperature of the table top is kept uniform. The adjusting mechanism is simple and works with smoothness. All fluids coming in contact with the table drain towards the trough which can be seen in the illustration and are thence conveyed to a pail or other receptacle placed beneath the table.

The wash-stand contains in its table-like portion a metal tank beneath a glass table top. This vessel is intended to contain an antiseptic fluid, which fluid is conveyed to a basin through an indiarubber tube. The water-supply is controlled by a foot pedal and the plug at the bottom of the basin over the waste tank can be removed without wetting the hands.



THE LANCET.

LONDON: SATURDAY, MAY 2, 1903.

The Varioloid Epidemic in the West Indies.

THE remarkable, and indeed unexampled, situation that has arisen in the West Indies in reference to the nature of an eruptive fever now prevailing in Trinidad as well as in some of the lesser islands again claims our attention. From the summary given in THE LANCET of April 18th, p. 1121, our readers have been placed in possession of the leading facts and in returning to the subject to-day we do so with the object of reiterating our opinion as to the desirability of a thorough and impartial inquiry into the facts. For the question is narrowed down to one of medical diagnosis, upon the accuracy of which depend the happiness of numbers of British subjects and the prosperity of some of the fairest of British colonies. It is unfortunate that upon a question that involves the adoption or not of vigorous prophylactic measures there should be any room for difference of opinion. In the present not very edifying exhibition of such differences between the medical authorities of Barbados and Trinidad it is with a humiliating sense of the limitations of medical science, even in this boasted age of progress, that we find the question as to whether a contagious eruptive disorder is to be regarded as small-pox or not made a subject of public controversy and misunderstanding. It is quite clear that such a state of affairs should not be suffered to continue and that an authoritative declaration from an impartial source should decide the matter. Now, although we have been favoured with many documents setting forth facts which tell both for and against the views maintained by the majority of the profession in Trinidad, we do not feel that we should be justified in expressing a decided opinion, for such an opinion can only be arrived at on the spot; we do, however, think it incumbent upon us as representing the medical profession of Great Britain to set forth as tersely as possible the salient medical problems that await solution.

For what are the facts? Barbados was infected by a disease recognised as small-pox about a year ago. The disease was introduced from Canada where for some year or two it has been prevailing. In spite of the adoption of strict measures the epidemic at Barbados lasted for more than nine months to the great interference with trade and heavy financial loss. The character of the outbreak was fortunately not a severe one—the mortality has been about 8 per cent.—and now that fully nine-tenths of the population have been vaccinated the island is practically immune. In its comparative mildness of type this epidemic at Barbados conformed to that which had spread in Ontario, where it was reported at the time that very many cases passed unrecognised, and a like benign character seems to have prevailed in the disease which also invaded several parts of the United States. The history of all epidemics shows such variations in type and it would not be difficult to gather examples of marked divergencies in this respect amongst localised outbreaks in this country. The appearance in Trinidad last autumn of an infectious eruptive disorder not unnaturally led to the inference that this outbreak was of the same nature as that against the dissemination of which from Barbados such vigorous measures had been taken. To the observer on this side of the Atlantic it would have seemed clear that not for the first time in history even the strictest measures of quarantine had failed to prevent invasion of the sister island. Such, however, does not appear to have been the conclusion arrived at by those in daily contact with the disease in Trinidad. They could not recognise the characters of small-pox in this malady and consequently did not adopt any serious measures to prevent its spread. Even where patients were treated in hospitals they were discharged as convalescent long before the skin was free from traces of the exanthem. Nor has the disease been limited to these two islands. It has appeared also in St. Kitts, St. Vincent, Demerara, and Grenada. The irony of the situation is seen in the fact that whereas Trinidad during the course of the Barbados epidemic imposed very strict measures of quarantine on vessels coming from Barbados Trinidad is now itself submitted by Barbados to similar restriction because it is the seat of an outbreak which in Trinidad is declared not to be small-pox at all.

It is impossible to peruse Mr. J. F. E. BRIDGER'S report made to the Barbados Government of the Trinidad outbreak, or to see the photographs of some of the Trinidad patients, with which we have been supplied, without being struck by the great similarity between these cases and small-pox. Science has not yet revealed to us the crucial test in the diagnosis of small-pox and many other of the exanthemata. We know of no specific organism which can be isolated and cultivated or any test comparable with that of WIDAL which is now so commonly used to confirm or to refute the diagnosis of typhoid fever. It is by clinical history and characters alone that the practitioner is to be guided; and that the diagnosis is not always simple and easy is shown by the number of cases in every small-pox outbreak about which mistakes are made. There is no difficulty at all in the typical unmodified case. The incubation period is definite; the rash appears at an almost regular interval from the sharp onset of general symptoms and its appearance is accompanied by a subsidence of fever; the eruption has its favoured sites of election and runs through its stages of papulation, vesiculation, and pustulation with regularity, the last-named stage being accompanied by secondary or septic fever; then come the slow return to convalescence, the desiccation of the pustules, the shedding of the crusts, and the resulting cicatrisation of the areas involved. But there is much variety even in unmodified cases and in those that are modified by previous attack or vaccination the typical characteristics of the disease may be almost wanting.

According to Mr. BRIDGER, who saw some 40 cases of the disease in Trinidad, the epidemic is without doubt one of small-pox of a mild type which at the time of his visit was

not known by him to have resulted in any deaths, although subsequently he was able to adduce evidence of the deaths of two infants in December and January—the one from "enteritis, bronchitis, and varicella," and the other from "varicella and asthenia." The latest report (March 20th) is that since October there have been 889 cases and three deaths. Of the cases which he saw the greatest age incidence was between 20 and 25 years and the incidence between 20 and 35 years was greater than at all other age periods put together. The incubation period as determined in one definite case was 12 days. There were usually three or four days of prodromata, fever, headache, and pain in the back in the majority of the cases, and vomiting in more than half. The rash which then appeared came out first on the face and often spread over the limbs and trunk and without exception he saw the eruption on the palms of the hands. The appearance of the rash was accompanied by a fall in the temperature. He satisfied himself that the skin lesions were not superficial, as is the rule in varicella, that they were followed in the more severe cases by pitting, and that the apparent short duration of the disease could be explained by the early discharge of patients from hospital when still desquamating. He differed from the local authorities also in averring that the eruption did not, as alleged, come out in successive crops, although it often early became vesicular and some vesicles would remain unchanged whilst others would be becoming pustular. Secondary fever was absent in a large proportion of patients, but he adduces a case to show that it undoubtedly appeared when the eruption was of a semi-confluent character. Lastly, as regards vaccination he was enabled to make a few trials which so far as they went seemed to show that the presence of the disease interfered with a successful result in vaccination. It is also instructive as indicating the really mild type of the affection, should it prove to be small-pox, to learn that out of 37 cases that he saw 26 had never been vaccinated, five had been vaccinated only in infancy, and three between infancy and seven years of the disease, but none within the latter period, whilst three were vaccinated during the incubation period. That vaccination and revaccination seem to have become actively employed of late in Trinidad, as is stated to be the case, is a fact which may or may not signify much; and as bearing on the true nature of the outbreak the immunity from attack of the coolie population, who are amongst the best-vaccinated members of the community, is to be remarked.

On the other hand, medical opinion in Trinidad at the time of Mr. BRIDGER'S report was almost unanimous against the disease being small-pox; moreover our attention has been directed by Dr. JOHN BROWNLEE to the parallel that has been drawn between this outbreak and one which he together with Dr. R. S. THOMSON recorded in THE LANCET of Oct. 22nd, 1898 (p. 1051), as observed by them in some Lascars. That paper is a very thorough and careful study of an anomalous affection which resembled in its features an outbreak of what was termed "varioloid varicella," reported by Dr. IZETT ANDERSON as occurring at Kingston, Jamaica, and related to the Epidemiological Society in 1866. Some of Dr. BROWNLEE'S patients had previously suffered more or less severely from small-pox and the affection did not appear to be influenced by vaccination. It should, however, in fairness be stated that in certain important respects, such as the general absence of secondary fever, the absence of any special predilection of the eruption for the face and scalp (the bulk of the rash appearing on the back, chest, and arms) and the entire absence of the eruption from the palms and soles, the affection described in that paper does not conform to the symptoms which Mr. BRIDGER observed in some of the Trinidad cases. Looking at the question from a broad epidemiological standpoint it is impossible to avoid the conviction that the disease now prevalent in Trinidad is the same in nature as that which is apparently gradually spreading to other parts of the West Indies, and that it is also identical with the Barbados epidemic which in turn is unquestionably the offspring of the Canadian outbreak. If the last-named was small-pox then all are small-pox; if, on the other hand, the Trinidad disease is not small-pox, then no more were the outbreaks in Barbados and in Canada. The mere fact of mildness of type does not *per se* negative the small-pox theory, although of course it is a point in favour of the varicella hypothesis. But if the affection is not small-pox, then the cost to Barbados has been heavy indeed. If it is small-pox then Trinidad has been running great risks and is, we fear, largely responsible for the spread of the disease. Should it be small-pox it is almost too much to hope that it will invariably exhibit the mildness that has hitherto characterised it. Lastly, whether small-pox or not, it is just as contagious as if it were and does not merit the somewhat contemptuous treatment which it seems to have received in Trinidad.

We do not pretend to decide the debateable point which might be discussed *ad nauseam* in leading articles without any conclusion being arrived at. The only way to solve the problem, and to insure that efficient measures are taken for the stamping out of the disease, is for the home authorities to respond to the appeal from Barbados and to send out a small but skilled commission which might well contain one or more of those medical men whose recent experience in the epidemic in London has qualified them to speak with authority upon the subject of the differential diagnosis of small-pox. During that epidemic many a case was sent for isolation in the hospitals of the Asylums Board under suspicion of being small-pox which a careful preliminary examination proved not to be small-pox. For although in well-marked forms nothing is easier than the diagnosis of small-pox, there is never an epidemic without some cases which present anomalous features and differentiation is by no means an easy thing in any case. We commend the appointment of such a commission to the attention of the Colonial Secretary and his advisers as a step of immediate urgency.

Tent Life for the Tuberculous Insane.

IN a communication to the annual meeting of the American Medico-Psychological Association, held at Montreal last year, of which a reprint has just been issued, Dr. C. FLOYD HAVILAND of New York calls attention to a new and interesting development in the care of the tuberculous insane

as exemplified in the scheme of tent life, a system inaugurated in 1901 at the Manhattan State Asylum, Ward's Island, New York City, by Dr. A. E. MACDONALD. The working of this system of isolation and open air treatment is stated to have been attended with the most gratifying results in the year during which it has been in operation.

On June 5th, 1901, 40 tuberculous patients, including in this number cases of miliary tuberculosis and pulmonary tuberculosis, began a residence in tents. Two large tents were employed, each being 14 feet high and having a capacity of 20 beds so as to allow 40 square feet of floor space per bed. These tents were erected upon elevated dry ground surrounded by abundant trees and constantly swept by breezes from the East River which they overlooked. The ground was cleared of all vegetation beneath each tent and a board floor was constructed about 18 inches above the ground. The floor being made in sections could be taken up and exposed to direct sunlight as occasion demanded. In pleasant weather one side of the tent was kept constantly open to the pure air outside and at all times ample ventilation was afforded by large ventilators placed near the top of the tent at either end. Close by these were erected several small auxiliary tents, including two dining tents, a clothing tent, and tents for the use of attendants and nurses. Other conveniences were also erected at various distances for the use of the camping patients. All food was supplied from the main kitchen and was eaten in the dining tents by those not confined to bed. The patients received frequent baths and strict personal cleanliness was observed. The floors of the tent were regularly scrubbed with warm water containing carbolic acid, the broom being rarely used. All linen was thoroughly disinfected prior to being sent to the laundry. The expectoration cups and utensils constantly contained a 2 per cent. solution of creolin and in no circumstances was the sputum allowed to become dry. The atmosphere was sprayed hourly during each day with a solution of the following: guaiacol, 150 grammes; eucalyptol, 120 grammes; carbolic acid, 90 grammes; menthol, 60 grammes; thymol and oil of caraway seed, of each 30 grammes; and rectified spirit, 2500 grammes. This spray, apart from its antiseptic properties, was found to be obnoxious to insects. Asepsis was thus observed in every detail, while under this plan of treatment complete isolation from the remainder of the asylum population was secured. Four meals were served daily, the diet being ample, nutritious, and varied, and consisting of milk, eggs, meat, cocoa, beef-tea, biscuits, fresh fruit, and vegetables. Particular attention was given to the free use of milk obtained from cows on the asylum farm, which were examined and found to be free from tuberculosis. Only symptomatic medicinal treatment was resorted to, reliance for the improvement of the patients being placed chiefly upon the hygienic measures employed. This plan of treatment was followed through the summer months and owing to its success it was continued on a smaller scale—one large tent, with the necessary auxiliary tents, accommodating 20 of the more active patients—throughout the year. As the winter approached heating arrangements were provided by erecting two large heat-radiating stoves, one at each end of the tent, while an ordinary grate stove with pipe and ventilating attachment was also erected and a coal fire was kept burning constantly in it during the winter. All danger from overheating or from fire was obviated by having the parts of the grate and of the pipe which came in contact with wood or canvas thickly covered with asbestos, while there was no difficulty in maintaining an equable temperature in the tent throughout the winter.

During a period of a year, says Dr. HAVILAND, 81 patients were given the benefits of tent life. The average death-rate among tuberculous inmates, which in recent years had been 14 per cent. per annum in the institution, was found to fall to 8½ per cent. among the patients who led a tent life. A chart of the progress in health of the patients, as shown by records of their weight made every month, demonstrated that during their camp life many of them improved greatly. Of the 81 cases 55 showed an increase in weight, the average gain being 6½ pounds of bodyweight at the end of the year. The patients who died were all in an advanced stage of the disease when admitted. Appetite and assimilation of food were improved, pyrexia was diminished, and night sweats were notable by their absence. Without being unduly enthusiastic, says Dr. HAVILAND, it may be stated that tent life gives better prospects for health and improvement and more advantages than do other practical plans of treatment for the tuberculous insane.

Some Thoughts on Golf.

ON April 25th Mr. BALFOUR was the guest of the Sundridge Park Golf Club, the occasion being the opening of the new course. At a large luncheon party given by the club the Prime Minister, in response to the enthusiastic reception of the toast of his health, made a brief speech eulogising golf as an important factor in the making of life pleasant and healthy for the workers of great cities. The occasion being what it was Mr. BALFOUR could hardly have said less, and, of course, he said it with the felicity and genuine kindness that ever characterise his public appearances. Undoubtedly the multiplication of golf courses in the neighbourhood of crowded business centres has greatly increased the amenities of life for many men. But it is none the less open to doubt whether the invitation to waste of time that is offered by the Scottish national game—a game which the English and Irish, to say nothing of our colonial empire and the United States, have lately seized upon—does not counteract some of the benefits to be derived by playing it. The pursuit of health can never be waste of time, all medical men will be found saying, inasmuch as effective work can only be done by men in sound physical condition. In this way the laying out of golf grounds in the neighbourhood of crowded towns must be regarded as a practical form of preventive medicine. The nation will be benefited by the increased industry of men who by using modern opportunities for obtaining fresh air and exercise will be able to discharge their duties with ardour and thoroughness. This is one side and it is the one which Mr. BALFOUR, as the guest of a new London golf club and the soul of courtesy, was bound to dwell upon. We should like to say something on the other side. If

"The healthy mind in the healthy body" is a truism much employed by our profession, so is the equally obvious proverb, "Enough is as good as a feast." Too much time is spent over golf and men bring to bear on the game an industry and a devotion to detail which ought to be expended upon more serious things. This kind of enthusiasm for a form of recreation cannot be regarded as merely a struggle to maintain the standard of physical health on which mental health depends. It must rather be looked upon as immoderate attention to a fascinating sport and must be guarded against like any other form of excess. It is an admirable thing in golf—which we admit to be an excellent game even while we desire to say a warning word against its cult—that it cannot be played carelessly and that assiduous practice is required after the position in the handicap list that is somewhat contemptuously described as "domestic twelve" has been reached, if a higher standard is to be attained. It is exactly here that golf proves, to our thinking, a pitfall to many men—some of them of our profession. Whatever is worth doing is worth doing well is an axiom that every medical man and every thinking man must cordially endorse. As no one can play golf really well without the sacrifice of much time the working man is soon brought to a parting of three ways. Shall he leave off playing a game in which he can only excel by much expenditure of time? or shall he continue to play moderately a game which he feels that he could, an he would, play much better? or shall he give more thought than is right to what, at best, is but laborious idleness? We hope that all our readers will take the middle course. Let them reap the undoubted good that is offered to them by a break in their round of toil and by brisk exercise on open hill and heath, and let those of them who are not brilliant exponents of golf recognise cheerfully that excellence can only come by the neglect of more important things.

Annotations.

"Ne quid nimis."

THE LONDON COUNTY COUNCIL AND THE APPOINTMENT OF OFFICIAL PATHOLOGISTS.

WE published in THE LANCET of April 18th, p. 1114, a letter which had been addressed by the London County Council to the large general hospitals of the metropolis asking the coöperation of the hospitals in the selection of skilled pathologists who would attend at the fee of two guineas to make post-mortem examinations and to give medical evidence thereon at coroners' inquests. We published at the same time the reply which had been sent to the London County Council by the staff of Guy's Hospital, in which the staff of the hospital, while approving of the suggestion that skilled pathologists should be asked to assist at post-mortem investigations of a special character, considered that the fee of two guineas was inadequate. We are a little surprised to find that this correct view of the situation does not seem to commend itself to all the general hospitals where application for assistance was made by the London County Council. Delegates from the hospitals met recently to consider a letter which had been drafted some time previously as a joint answer from the hospitals to the London County Council. The letter was an acceptance of the Council's pecuniary terms upon the understanding that such remuneration should be only of a temporary nature. Five hospitals, it appeared at the meeting, were agreeable to the signing of this letter and were ready to appoint pathological experts to perform post-mortem examinations for the coroners of the county of London at the fee of two guineas. Four hospitals, who should be named—St. Bartholomew's Hospital, University College Hospital, Guy's Hospital, and Westminster Hospital—refused to sign the letter; and the authorities of St. George's Hospital and St. Mary's Hospital have not come to a decision. There was some singular voting at the conference of delegates, if a "delegate" is to be taken to mean a representative possessing no individual discretion—the usual meaning of the word. The Westminster Hospital declined to sign the letter accepting the pecuniary terms of the London County Council, but the delegate of Westminster Hospital at the meeting of delegates voted for the signature of the letter. The delegate of the London Hospital, one of the hospitals that had agreed to sign the letter, voted for an amendment which was virtually a resolution that the letter should not be signed, and when the amendment was lost and the original motion was put did not vote again. We are sorry to chronicle any difference of opinion upon the matter. The evidence of special pathologists is required in special cases, but just because the occasions are unusual and the knowledge wanted is exceptional the fees should be good. Two guineas is a completely inadequate fee.

TEST PRESCRIPTIONS.

THE question of substitution has been taken up in its bearing upon the making up of prescriptions and certain allegations have been made against pharmacists who have been accused of substituting cheap for the more expensive drugs that were included in a test prescription. We have given considerable attention lately to the practice of substitution in the spirit trade, but, as we have pointed out, it is difficult to deal with this practice by law and control can only be exercised so far as regards the alcoholic strength of spirits such as whisky, gin, and brandy and not as regards their admixture with foreign spirit. But with drugs and prescriptions the case is different. The Sale of Food and Drugs Act provides sufficient machinery to prevent fraud on the part of pharmacists although it may be that the number of samples of drugs officially examined bears but a small relation to the number of samples of food. Public analysts on the whole have shown some amount of indifference in regard to the section of the Act relating to drugs probably because samples of drugs cannot be so readily examined as samples of food. It would take much more time and skill to analyse a prescription than to sort, say, genuine coffees or genuine milks and butters from admixtures. At any rate, the annual returns constantly show that a very small proportion of samples of drugs are taken for analysis compared with the number of samples of foods. This, of course, should not be the case, although we believe that on the whole little exception can be taken to the methods on which the pharmacist conducts his business. According to our own experience the pharmacist, much to the credit of the pharmaceutical profession, may be trusted in general to make up prescriptions or to sell drugs exactly as they are ordered. Of course, now and again there are exceptions, but they are comparatively rare. Not long ago we instituted an inquiry into the question of prescriptions being made up accurately and after securing samples in response to a test prescription we submitted them to careful analysis and the results, although they did not

relate to a large number of samples, were quite satisfactory, as may be gathered from the following examples. In the first instance, a prescription was presented containing liquor arsenicalis and tinctura ferri perchloridi as its important constituents. The amount of arsenic in the mixture worked out at 0·036 grain per half fluid ounce and the iron at 0·91 grain per half fluid ounce. In one prescription the amounts of arsenic and iron found were 0·038 grain and 1·0 grain respectively. At another shop the medicine was found to contain 0·045 grain of arsenic and 1·46 grains of iron respectively per half fluid ounce. On another occasion quinine hydrochloride with hydrobromic acid was ordered, five grains of the former and hydrobromic acid equivalent to 1·82 grains per fluid ounce. The amounts of quinine hydrochloride and hydrobromic acid found in the medicine made up at one shop were respectively 5·05 grains and 2·0 grains. At another shop the amounts respectively found were quinine hydrochloride 4·90 grains and hydrobromic acid 1 80 grains per fluid ounce. In a third instance a mixture was ordered containing per fluid ounce 10 grains of ammonium bromide, five grains of sodium bromide, and five grains of potassium bromide. Analysis subsequently showed 11·06 grains of ammonium bromide, 4·50 grains of sodium bromide, and 5·2 grains of potassium bromide. As time permits we hope to continue this inquiry, but meanwhile the results so far show that as a rule prescriptions are made up with distinct accuracy. We should be surprised if it were otherwise, as the pharmacist realises the pains and penalties which he is likely to risk by stepping from the path of integrity and he knows that he may at any time be subjected to an official test.

THE PROGRESS OF REFORM IN EGYPT.

THE Earl of Cromer's annual report is more interesting this year than usual, His Majesty's Agent and Consul-General having decided that the moment was opportune for the introduction of a historical retrospect extending over the last 20 years. It is as well, he says, that the Egyptians of the rising generation, to whom a good deal of rather wild talk is at times addressed, should be reminded of the real facts of the case. In 1878 a commission of inquiry, of which Lord Cromer himself was a member, summed up the situation as it then existed in the following terms: "Il s'agit, en effet, de créer tout un système fiscal, et cela avec un personnel très restreint; à présent presque rien n'existe de ce qui doit exister." The commission found that the abuses which had grown up in every branch of the Egyptian body politic were so general and so deeply rooted as to defy the application of any remedy which would be effectual and at the same time speedy. "They had to deal, not with a patient suffering from a single malady, but with one whose constitution was shattered and whose every organ was diseased." The task set before Lord Cromer and his select band of reformers was truly herculean, demanding as it did a reduction of excessive taxation and at the same time the introduction of expensive reforms in every direction, but more especially in the direction of drainage and irrigation. During the 20 years from 1882 to 1901 the total revenue from all sources amounted to £E.224,206,151, while the outlay during the same period came to £E.213,765,415, the balance of £E.10,440,736 representing the sums in reserve which are at present at the disposal of the Commissioners of the Debt. Irrespectively of the relief to the population in general by the reduction of the salt tax and by the lowering of the postal, railway, and telegraph rates, taxation to the amount of about £E.32,000,000 has been remitted, and this in spite of an extra charge of upwards of six and a quarter millions which has resulted from the re-occupation of the Sudan. The aggregate amount granted to the sanitary department during the 20 years was £E.1,852,515, or less than 1 per cent. of the entire expenditure. The greater part of this money was devoted to medical rather than to sanitary work, and in addition "considerable sums" were spent on hospitals, being debited against the public works budgets. In this connexion Lord Cromer says: "Some further expenditure, notably in the direction of making proper provision for lunatics, will probably be required in the purely medical branch of this department." His lordship also says that it would be a great mistake to suppose that of late years nothing has been done to improve the sanitary condition of the country. Such is far from being the case. Suitable sites for cemeteries have been provided for almost every village in Egypt. The important and difficult work of placing the mosques in a good sanitary condition has been steadily proceeding for many years. Pure drinking water has been provided in several of the larger provincial towns, the main difficulty being to get the people to use it. Many of the *birkets*, or stagnant ponds, which exist in the neighbourhood of most Egyptian villages have been filled up. Heavy expenditure has also been incurred at the quarantine establishment at Tor. At the same time it is certain that much remains to be done. "My personal opinion," continues Lord Cromer, "is that it would be a delusion to suppose that sanitation, which, it must be remembered, is a comparatively modern science, can produce in this country anything like the results obtained in Europe until, with the advance of knowledge and education, the ideas and habits of the mass of the population undergo a material change. Nevertheless, I fully recognise that, to some extent, the Government must take the lead in a matter of this sort. When funds are available more money should certainly be spent on sanitation." This is a highly satisfactory declaration. The exigencies of finance have hitherto interfered sadly with the development of sanitation in Egypt, but in 1890 Lord Cromer was able to announce the welcome fact that "financial equilibrium was secured" and he now adds that the "moment has arrived when fiscal reform need no longer be placed in the front rank." That the necessary funds for sanitation on a large scale will soon be available is probable. In 1905 the increased revenue to be derived from the construction of the reservoirs will begin to flow into the treasury. "From that time onwards, therefore," says Lord Cromer in conclusion, "it may be hoped that administrative reform, in so far as it depends on financial policy, may occupy a more prominent place in the Government programme than heretofore. I may add that, in my opinion, the points which most require attention are the Police, the Department of Justice, and Sanitation."

AN IMPORTANT STEP.

THE pecuniary difficulty which may beset the young medical man who decides upon continuing work at his hospital after qualification and the holding of resident appointments is often an overwhelming factor in causing him to alter his decision. As matters stand at present it is often the case that the man who by nature and ability is best fitted to continue hospital work and to devote himself entirely to one particular branch of his profession is unable to do so because of the inadequate rewards attaching to the posts which for many years he will be called upon to fill. That this should be the case is obviously a pity, not only from the point of view of the medical profession but also of the general public. Unfortunately, it is not always as obvious to the lay mind as it is to the mind of the medical man that services such as those rendered by registrars, curators, and pathologists at hospitals are in reality of as vital importance as those of the physicians and surgeons. The work of the latter is palpable and appeals to the most uninformed; the necessary work of the former does not

equally strike the mind of the general observer and its intrinsic importance and its bearing upon the general progress of medicine and surgery are therefore apt to be overlooked. We can, therefore, speak in terms of commendation of the recent action of the governors of St. George's Hospital in deciding to award to the posts of registrar, curator, and assistant curator the yearly sums of £200 for the registrars (two medical and one surgical) and curator and £100 for the assistant curator. In making these awards the board, very largely composed of laymen, shows a just appreciation of the services to which we have referred and has the satisfaction of knowing that at its own hospital at least it is open to every man, however straitened his means may be, to devote himself to the work for which he is most wanted and for which his talents best fit him.

HERPES OF THE OPHTHALMIC DIVISION OF THE FIFTH NERVE WITH OPTIC NEURITIS.

HERPES of the ophthalmic division of the fifth nerve is sometimes complicated by conjunctivitis or iritis; more rarely there is paralysis of some of the ocular muscles or the optic nerve is affected. Very few cases of optic neuritis and atrophy, unilateral or bilateral, in the course of herpes of the ophthalmic division of the fifth nerve have been published. In the *Gazette Hebdomadaire des Sciences Médicales de Bordeaux* of April 12th Professor Cabannes has published the following case. A man, aged 30 years, was admitted to hospital on Jan. 1st with pain and inflammation of the left eye and side of the face. On Dec. 24th, without apparent cause, the attacks suddenly began with redness and lacrymation of the eye and pain in the forehead and upper lid on that side. On the first day the pain was moderate but on the following days the redness and pain increased and vision in the left eye diminished. On Dec. 28th the redness, till then confined to the eye, rapidly involved both lids, the left half of the nose, the left side of the forehead, and the corresponding half of the cranium in its anterior and middle part. The erythema was accompanied by considerable swelling of the skin which was swollen, tense, and shining. The very œdematous eyelids prevented the eye from being opened and the conjunctiva was intensely injected. After some hours little pruriginous vesicles appeared in confluent groups. The contents were at first lemon-coloured or hæmorrhagic but soon became purulent. On admission erysipelas was diagnosed. At this time the eye was not painful but the lids were greatly swollen and glued together by muco-purulent secretion, there was chemosis of the conjunctiva, and the cornea had lost its polish and was a little opaque. The patient said that he had never felt ill during the attack but after admission his temperature several times reached 100·4° F. On Jan. 12th the eyes were more thoroughly examined. The left upper lid was rosy and so œdematous that the orbito-palpebral wrinkle was effaced. On separating the lids with the fingers the ocular and palpebral conjunctiva showed a uniform rosy injection. There was then no chemosis. In the internal and central part of the cornea was a small diffuse opacity of the size of a lentil, cloudy, and difficult to appreciate in consequence of its slight intensity. The affected part of the cornea was insensible to contact and to pricking. The external third of the cornea was completely transparent and its sensibility was normal. The line of transition between anæsthesia and sensibility was vertical. The anterior chamber was deep. The pupil was dilated and immobile. (Some days before a single drop of atropine solution had been put in the eye.) Vision in the right eye was normal; in the left it was almost entirely lost, light could scarcely be perceived. The left fundus was difficult to examine, not only because of the state of the cornea but also because the vitreous was cloudy. The optic disc was a little pale, the arteries could scarcely be seen, but the veins were turgescent and tortuous. There was no swelling of the disc. Near the disc were two flame-like hæmorrhages parallel to the course of the veins. The ocular tension seemed to be slightly diminished. The redness of the forehead had much diminished and the skin showed brown pigmentation especially around the crusts left by the vesicles. The whole affected region, which was sharply limited by the middle line and externally by an irregular line running from the external angle of the eye to the parietal region, was hypæsthetic. On Jan. 27th the eye was still red and watery and its tension was diminished; the cornea was completely transparent and showed only a slight loss of polish in its internal part, but the anæsthesia persisted. There was already somewhat advanced atrophy of the optic nerve. The disc was markedly pale, the arteries were considerably narrowed, and the veins were congested. The hæmorrhages had disappeared. Professor Cabannes calls attention to the characters of the optic neuritis—early onset in the disease, intense congestion without œdema or marked strangulation of the vessels, and the hæmorrhages. In these the process resembled the optic neuritis of the acute infectious diseases such as typhoid fever and secondary syphilis. We may add that this is interesting in the light of the modern view that herpes zoster is a nervous complication of infectious diseases. Thus the optic neuritis, like the motor paralysis which sometimes also occurs, may be regarded as of similar origin.

IS PLAGUE SPREAD BY FLEAS?

AT a meeting of the Bombay Medical and Physical Society held on Feb. 13th Captain W. Glen Liston, I.M.S., read a paper on Some Facts which would appear to associate Fleas with the Spread of Plague. He said that the report of the Indian Plague Commission showed that the common mode of the entrance of the plague bacillus into the human organism was through the skin. With regard to rats the commission concluded that the infection of these animals, either through the alimentary canal or through the mucous membrane of the nose, could not be very common. It would therefore appear that both human beings and rats are for the most part infected through the skin. It is also well known that plague spreads in a certain class of houses—namely, in those which are dirty, dark, overcrowded, and vermin-infested, whereas in houses or hospitals which are clean and have a sufficient access of air and light it may be introduced again and again without the infection spreading from man to man or man to rat. Dr. Simond was the first to suggest that plague might be communicated by fleas not only from man to man and rat to rat but from rat to man and man to rat: his paper on the subject was published in October, 1898, in the *Annales de l'Institut Pasteur*. The arguments on which he relies are, however, far from being conclusive, and in connexion with the theory of the conveyance of plague by rats it has always been found difficult to explain why certain epidemics of plague among rats have not been followed by epidemics among men and *vice versâ*. Captain Liston suggested that an explanation might perhaps be found in differences existing between the human flea (pulex irritans) and rat fleas. When in England he had described the common rat flea of India to the Hon. Charles Rothschild, a great authority on the Siphonaptera, who believed that it was probably similar to pulex pallidus, a species which had been found in South Africa and Australia. The common rat flea of India is at first sight very like the human flea, but close examination reveals certain differences between the two species, principally (1) in the size and shape of the claws on the legs in both sexes and

(2) in the genital apparatus of the males.[1] Captain Liston has examined some 50 specimens of fleas caught on rats (mus rattus and mus decumanus) in India and has up to the present found only pulex pallidus; he has also examined 28 specimens of fleas caught on man, of which 27 were pulex irritans and one was pulex canis, the common flea of the dog. He believed that the close resemblance between pulex pallidus and pulex irritans and the absence of pulex pallidus from many European countries might account for the frequent association together of plague epidemics in rats and man in India, South Africa, and Australia, and the comparative rarity of this association in European countries where pulex pallidus is not found. In European countries, or at least in Great Britain, the common rat flea is ceratophyllus (? ceratopsyllus) faciatus, which is structurally quite different from the human flea; it may perhaps therefore differ from the latter in its habits and possibly does not bite or infest man. In the discussion Major W. B. Bannerman, I.M.S., said that it was very improbable that hospitals full of patients and their unwashed friends should be free from fleas. Moreover, in the days of house-to-house visitation hundreds of susceptible persons must have encountered vermin of various kinds in plague-infected rooms every day and yet plague among these visitors and among the staff of the hospitals was hardly ever heard of.

THE DIAGNOSIS OF SMALL-POX.

THE difficulty which is occasionally experienced in the diagnosis of small-pox was exemplified by a case which occurred recently in the casualty department at Guy's Hospital. A youth, aged 18 years, returned home from Tonbridge feeling very ill and sought advice at the hospital. He received certain treatment and was told to attend again. His condition became worse and an eruption appeared on his body for which an ointment was prescribed. The case proved ultimately to be one of small-pox and three children in the same house contracted the disease. A typical case of small-pox is not difficult to recognise, but when the eruption is atypical an error in diagnosis is easily committed. As will be seen from one of our leading articles this week, it is possible for medical opinion to be gravely at issue over the diagnosis of varioloid disease of obscure character. We have several times urged in our columns that greater facilities should be offered to practitioners and students for the study of this disease. The want of such experience was frequently demonstrated during the last epidemic. Occurrences such as the above infinitely damage the reputation of hospitals and a single case of small-pox remaining undetected may be the starting-point of a serious epidemic.

FATAL COLCHICINE POISONING FROM A MEDICINAL DOSE IN A CASE OF KIDNEY DISEASE.

AT the meeting of the Société Médicale des Hôpitaux of Paris on Feb. 27th M. Courtois-Suffit and M. Trastour described the following case. A man, aged 43 years, had nephritis and was subject to gout. During an attack his medical adviser ordered him to take daily eight capsules each containing a quarter of a milligramme of colchicine and 20 centigrammes of salicylate of methyl; one capsule was to be taken every hour. Hoping to cut short the attack the patient took 12 capsules within an hour on the evening of Feb. 7th and passed into deep sleep. In the morning he awoke very prostrated and vomiting mucus tinged with black blood. The bedclothes were stained with blood which he had vomited during the night. Melæna and hæmaturia followed and the hæmatemesis continued, but there was no diarrhœa. On the 12th he was admitted to hospital in a state of exhaustion. His complexion was pale and earthy and his extremities were cold and cyanosed. There was neither abdominal pain nor tenderness, except in the epigastrium. The second cardiac sound was accentuated and there was a *bruit de galop*. Tremors were present and were exaggerated on the slightest excitement. M. Houdé and M. Laborde have called attention to such tremors as a symptom of colchicine poisoning. There was arthritis of the right elbow, which was also attributed to the colchicine as there had been no gouty manifestations for some days. The patient continued to eject by the mouth bloody mucus and to pass blood per rectum. Small ulcers were found in the anal region. Two litres of urine strongly tinged with blood and containing two grammes of albumin per litre were passed in the 24 hours. The patient became weaker and did not recognise his friends. Ecchymotic spots appeared on the limbs and the muscles became very tender. On the 17th there was hiccough and the tongue became drier and drier, the patient dying in the evening. The necropsy showed intense congestion of all the viscera, particularly of the stomach and intestines, with extravasation of blood in places. There was marked interstitial nephritis, the left kidney weighing only 60 grammes and the right 80. The urine up to the time of death contained colchicine—i.e., the drug had not been all excreted ten days after it was taken. On the other hand, one of the authors of the paper took a quarter of a milligramme of colchicine and found that it was all excreted within 48 hours. The absence of the usual symptoms of colchicine poisoning—headache, abdominal pain, abundant vomiting, and diarrhœa—is noteworthy. No doubt the renal disease played an important part in the fatal result. The case shows that colchicine should be given carefully to the gouty whose kidneys are often diseased.

FALSE DESCRIPTION IN THE SPIRIT TRADE.

THE discussion of the Budget proposals in the House of Commons should give, it seems to us, an opportunity to those members who are urging reform in regard to the practice of substitution which prevails so largely in the spirit trade. It may be remembered that in reply to Mr. Healy in the House of Commons on March 26th on this question, the Chancellor of the Exchequer said, "I shall always be willing to consider representations that may be made with regard to inquiries into this or any other matter. If any further communication between the honourable and learned gentleman and myself should lead me to believe that some good could be accomplished I should be pleased to entertain his suggestion." Mr. Healy's suggestion was that the right honourable gentleman should grant a departmental committee or a committee of the House to make some fresh inquiries into the new evils which had arisen. What is wanted also is a special inquiry upon the question as to whether chemical analysis in view of modern methods can throw any light upon the composition of all-malt whisky or a genuine grape brandy as distinct from "patent grain" or any foreign spirit. We have little doubt that a departmental committee composed of competent chemists and analysts would not be long in coming to the conclusion that chemical analysis to a very great extent will be found capable of showing what is genuine all malt-whisky, or genuine brandy, or foreign spirit, or a mixture. The Government must be aware that their officials—namely, the Customs and Excise officers—are continual witnesses to the following facts: (1) that enormous quantities of patent grain spirit distilled in England are blended in bond under the supervision of these officers and are subsequently vatted and bottled under the name of "Genuine Highland Whisky" or "Genuine Irish Whisky"; (2) that application is constantly being made to the Customs and Excise officers and granted

[1] Novitates Zoologicæ, December, 1898. Tring, Hertfordshire.

by them for vatting large quantities of raw spirit, made in some instances from such materials as maize and molasses, so that within a few weeks of distilling the spirit is placed upon the market in bottles labeled in such terms as "thoroughly matured," "of great age," and "old mellow"; and (3) that the Revenue officers keep books in which the exact particulars of such blends are entered. It is within our knowledge that some of these books have actually been seen by certain persons not in the Government service who have made notes of the details setting forth the source of the spirit and the date of its production and of its vatting. Surely in the face of these facts an inquiry into this matter should accomplish, in the words of the Chancellor of the Exchequer, "some good," or will the Government deny that a huge systematic fraud is daily going on.

A DIETETIC IDIOSYNCRASY IN AN INFANT.

AT a recent meeting of the Verein für Innere Medicin of Berlin Dr. Bendix brought forward the case of an infant, aged 13 months, the subject of an idiosyncrasy towards egg when given as a food, since about six or eight minutes after ingestion of any food containing this substance, either raw or cooked, a typical attack of urticaria developed. This was first noticed by the mother during the fifth month when after giving the child some food in which an egg was beaten up the eyelids became swollen, the conjunctivæ injected, and urticarial wheals came out on the body. A similar incident occurred in the seventh month, and as the child became older and the diet was increased the mother noticed that whenever egg in any form entered the diet a similar attack developed. No other article of diet had this effect. The child was otherwise healthy except for slight rickets. Dr. Bendix suggested that, although this was probably a very rare occurrence, in the cases of urticaria so frequently seen in infants it was worth while investigating whether the removal of egg from the dietary had any effect. Dr. Albu recorded a case of a child of English parents in whom from the first to the fifth year of life a skin eruption, diagnosed as erythema exudativum bullosum, frequently developed when eggs were included in the diet.

ON CHANGES IN THE BLOOD IN CASES OF ACUTE MANIA.

Dr. Lewis C. Bruce, medical superintendent of the Murthly Asylum, Perthshire, contributes to the *Journal of Mental Science* for April an article which deals with certain new and hitherto undescribed changes observed in the blood of patients suffering from "acute continuous mania" and points out that a new prognostic sign may be afforded as regards the duration and sequelæ of the disease by an examination of the blood. When a small quantity—about two cubic centimetres—of turpentine is injected with antiseptic precautions into the subcutaneous tissue of a patient suffering from acute mania an abscess is formed. The fluid within the abscess, consisting of blood serum and pus, is aspirated on the third day and a few drops of it are inoculated into tubes containing sterile nutrient broth, which are then placed in an incubator for 48 hours. 25 patients suffering from acute mania were thus treated and in eight cases microscopic examination of the broth showed the presence in pure culture of a small diplo bacillus, staining very feebly with Gram's method. A hanging-drop culture showed that the bacillus tends to grow in chains and also in clusters and that it is slightly motile. The organism was not fatal to rabbits, guinea-pigs, or white mice. In 23 of the patients there was induced a febrile attack within 24 hours after the injection of turpentine. In several cases the temperature rose as high as 102° F. In no case, adds Dr. Bruce, was the patient the worse physically for the abscess and in many cases there was marked benefit. "Some of the results in cases of acute mania were so satisfactory from a recovery point of view that I never hesitate to induce an abscess in every case of acute mania which does not rapidly improve under ordinary treatment." The presence of the abscess stimulates leucocytosis which in itself aids recovery in such cases. Dr. Bruce thinks that acute mania may be caused by a toxæmia arising from the presence in the blood of the diplo-bacillus above mentioned and believes that when recovery takes place a condition of immunity is established. During the last two years observations on the blood with special reference to the degree of leucocytosis present were also made on 50 cases of acute insanity, of which 14 were cases of acute mania, with the following results. During the first few days after the onset of acute mania the leucocytosis is high—viz., from 18,000 to 20,000 per cubic millimetre of blood, while the percentage of polymorphonuclear cells is always over 60, and often over 70, per cent. Nature apparently makes a vigorous effort at the commencement of the disease to counteract the toxæmia by an increase of the leucocytes in the blood. The higher the leucocytosis within certain limits and the higher the percentage of polymorphonuclear cells, says Dr. Bruce, the better is the prognosis. If the patient does not recover at once the leucocytosis sinks to between 12,000 and 16,000 per cubic millimetre of blood, which is still about double that of the normal condition. This condition may last for weeks and gradually lead to a stage of recovery. When the patient begins to show signs of actual recovery a curious change occurs in the blood. The leucocytosis increases and the percentage of polymorphonuclear cells rises, it may be, as high as 80 per cent. in the most favourable cases. The leucocytosis persists when recovery is actually complete but the percentage of polymorphonuclear cells falls to between 60 and 70 per cent. On the contrary, in cases which do not recover but tend to chronicity the leucocytosis tends to remain at between 12,000 and 16,000 per cubic millimetre with occasional rises and falls, but the percentage of polymorphonuclear cells tends to fall until finally, after the disease has lasted one or two years, their proportion may be anything from 20 to 50 per cent. With an exacerbation of the disease there may be increased leucocytosis but such an increase is very temporary. Mental improvement appears to be in proportion to the leucocytosis and especially to the increase of the polymorphonuclear cells. These observations, says Dr. Bruce, do not apply to cases of mania resulting from chronic alcoholism or from "*folie circulaire*." The observations tend to show that acute mania is an infective condition associated with the presence of a toxic agent in the blood and that the advent of recovery is marked by a high degree of leucocytosis which persists for some time even when recovery is established. The occurrence of puerperal mania would seem to add support to this theory.

THE JENNER INSTITUTE OF PREVENTIVE MEDICINE.

AS will be seen by a notice in our advertisement columns the governing body of the Jenner Institute of Preventive Medicine invites applications for the post of director of the institute. The salary will be £1000 per annum and all applications must be sent in by June 15th. Particulars of the duties of the post may be had on application to the Secretary of the institute, Chelsea Bridge-road, London, S.W. The objects of the institute as laid down in the constitution are as follows: "To found, establish, and maintain in or near London an institution for the study and investigation of the best means of preventing and curing the various infective diseases of men and animals and to provide a place

where research may be carried on for this purpose; to provide instruction and education in preventive medicine to medical officers of health, medical practitioners, veterinary surgeons, and advanced students; to prepare and supply to those requiring them such special and curative materials as have already been found, or shall in future be found, of value in the prevention and treatment of infective diseases." The potential value of such an institution is patent to all and it is obvious that the post of director will be one of great responsibility. The work, however, is interesting and the salary good, so we make no doubt that an able director will be secured.

THE HOUSE PAINTING AND DECORATING SEASON.

HOUSE painting and decorating are just now in evidence and the season is not without its dangers as well as inconveniences to those who are compelled by necessity or slender means to stop at home during its progress. The smell of paint is sickening to most persons and to many the painting and decorating of the house are a serious ordeal to be faced. Headache is a common experience at this time. Possibly the oil with which the painter mixes his pigments is sufficient to cause nausea although there seems to be little doubt that minute quantities of lead are inhaled also. Persons have been known to suffer from a severe attack of colic after sitting in a room for a few hours a day in which there were "canvases" covered with white-lead and a drying oil. Artists, again, have been attacked with paralysis owing to the action of the oil paint, even although the colours were ground and the brushes cleaned by an assistant. The quantity of lead so inhaled must be very small, but it should be borne in mind that some people are extremely susceptible to the action of the poison. Such persons should make a strenuous endeavour to leave the house during its painting and decoration, while those who are compelled to remain should take all reasonable precautions and live in the fresh air as much as possible. In the sleeping-room a very useful precaution is to leave the washing basin full of clean water or, better still, milk, during the night. In the morning a greasy film will be found on the surface of the water and it is reasonable to suppose that some of the oil has thus been attracted from the air. Milk is a well-known absorbent of odours and appears to act more effectually than water for this purpose, for after exposure in a freshly painted house the milk will be found to smell quite distinctly of paint. Milk thus tainted should, of course, be thrown away. Lastly, it may be pointed out that there are some excellent permanent pigments to be had now which are quite free from lead and in a great number of cases these paints might be substituted with decided advantage to the health of those persons who show a marked idiosyncrasy towards lead compounds.

THE PREVALENCE OF SMALL-POX.

THE *Dublin Evening Mail* of April 27th reports a case in which great carelessness appears to have been shown by the sanitary authorities of Dublin. Mr. J. Peckin, the clerk in charge of the corporation depôt in Stanley-street, was attacked by small-pox in a very acute form and died on the day following his admission to the isolation hospital. The report continues: "It appears that the deceased had never been vaccinated, but since his death all the people employed about the place have been vaccinated or revaccinated. The depôt is being used for receiving and destroying refuse taken from infected houses, and it is unfortunate that the vaccination regulations were not enforced sooner." The delay, there can be doubt, was most unfortunate. The authorities probably had no power to compel Mr. Peckin to be vaccinated, but they certainly should have made him the offer and in the case of his refusal they should certainly have not allowed him to work at the depôt. Small-pox continues to spread in the Midlands. There are between 30 and 40 cases at Leicester and cases are also reported from Coventry, Hucknall Torkard, Binley, Birmingham, Long Eaton, Little Eaton, and Kettering. In London a man applied at the Southwark Police-court on April 22nd, saying that his son had gone to Guy's Hospital where his disease had not been diagnosed and three other of applicant's children had contracted the disease. We refer in another column to the great difficulty of diagnosing atypical cases of small-pox.

THE INVOLVEMENT OF SENSATION IN CASES OF PARALYSIS OF CEREBRAL ORIGIN.

THE question of the involvement of sensation in cases of "motor" paralysis of cerebral origin has been long discussed by neurologists and opposite conclusions have been arrived at. The doctrine of the sensori-motor area as one localisation is still unsettled, though careful clinical investigations made during recent years seem on the whole to be tending to a definite solution of the question. In the *Journal of Nervous and Mental Disease* for March Dr. Alfred Gordon, lecturer on nervous diseases at Jefferson Medical College, Philadelphia, contributes a valuable series of observations made on 35 cases of motor paralysis (hemiplegia) of cerebral origin to determine the exact degree and extent, if any, of sensory loss or impairment. The study was undertaken without the slightest inclination towards the view of one school of neurologists or the other; the patients who were selected were mentally sound and lucid and able to answer questions correctly and were at the same time free from spinal disease or from other complicating affections. Each case was examined repeatedly on consecutive days and the results were found to be very uniform and constant. Finally, a re-examination of all the cases was made a month later, "and to my great surprise," adds Dr. Gordon, "the data collected proved to be exactly the same as at the first examination." Moreover, every case was examined in regard to hysteria, and in order to eliminate possible fallacies all cases with signs or stigmata of hysteria, except one of which mention is made below, were excluded. The following two cases may be recorded as illustrative of the results obtained. Case 4 was that of a man, aged 53 years, a labourer by occupation. There was complete right hemiplegia with some impairment of speech of six months' duration. The power of voluntary movement was present to a slight extent in the right lower limb. Sensation of touch was normal in the upper limb, but the sensations of pain and of heat and cold were diminished (hypæsthesia). In the face the sensations of pain, touch, and temperature were normal and the same remark applied to the trunk except that the sensation of heat was diminished. He could not recognise the size and nature of small objects placed in the hand (astereognosis) nor could he realise correctly the position in which the affected arm was placed. There were no paræsthesiæ and the special senses were normal. Case 35 was that of a man, aged 64 years, who had complete right hemiplegia of one and a half years' duration. The power of voluntary movement was more impaired in the arm than in the leg. The upper limb was numbed as regards sensibility to touch, pain, and cold, while heat was mistaken for cold. An exactly similar condition was present as regards the sensibility of the trunk. In the lower limb there was insensibility as regards touch and cold (anæsthesia) and also as regards pain (analgesia). Heat applied to the thigh was mistaken for cold. The sensibility of the face to touch, temperature, and pain was impaired. Astereognosis was present and he could not recognise the position of the hand and upper limb with the eyes closed. Some paræsthesia

was present in the upper limb. Summarising his observations Dr. Gordon concludes that, without exception, in all the cases of cerebral paralysis examined the sense of pain was impaired the most in all parts of the body—face, upper limb, trunk, and lower limb. The sense of heat and cold (temperature sense) was affected next in order of intensity, while touch (cutaneous tactile sensibility) was the least affected. "There was no exception to the fact that whether in pain, touch, or temperature, the hypo-sensations [diminution of sensibility] occurred in the largest number of cases, while anæsthesias were met with in a comparatively small number and hyperæsthesias in extremely few cases." It was also noticed that in the largest number of cases the impairment of sensibility to touch, pain, and temperature occurred in the upper limb and that the face was the least affected part of the entire individual. Verger of Paris has stated that the impairment of sensation in the limbs in cases of hemiplegia had a tendency to be most marked in the hands and feet and to diminish towards the proximal part (shoulder or hip), an assertion which Dr. Gordon found to be correct in a large number of his cases. The stereognostic sense was disturbed in 29 out of the 35 cases and in 22 of these the loss of this sense was complete. The greater the involvement of the other sensations the more marked was the astereognosis, a fact which tended to favour the conception of the stereognostic sense as depending upon the integrity of the separate tactile, muscular, and other cutaneous sensations. Finally, in the one case with symptoms of hysteria, which was studied as a test case, Dr. Gordon was able to satisfy himself that the sensory impairment present was parallel to that observed in other cases of cerebral paralysis and was in no wise dependent upon the neurosis present.

POPULAR SANITATION.

IT is always gratifying to those who are engaged in the conflict with disease to note the extension of sanitary knowledge and the translation of its principles into the rule and custom of ordinary life. Happily signs of such prudent intelligence are not wanting in our own day. Cleanliness is already for all classes of the people a word of much deeper and wider meaning than it was a quarter of a century ago. Even in its refined or "surgical" variety it can often be depended on with some degree of confidence in domestic practice. The danger of infection and the responsibilities which it entails are even better understood. Indeed, there is a tendency in many quarters to excessive caution in respect of it. We may reasonably hope, however, that with fuller knowledge and the passing of a transition period of half-light this morbid over-sensitiveness will give place to calmer views of personal and public duty. In the meantime we may be thankful that the national mind is awake on this subject. The notices displayed in many streets of the metropolis and in public vehicles in condemnation of the practice of spitting afford further proof of this wakeful spirit. In the tramcars under its control the London County Council has gone the length of prohibition under a penalty. The great importance of these precautions in relation to the danger conveyed by tuberculous sputa can hardly be exaggerated. We congratulate the local authorities on a method of notification so happily devised and so inexpensive. We should like to see it still further extended by railway and shipping companies and, above all, by owners of factories, workshops, and business offices. These latter are probably the chief sources of tuberculous contamination. The National Association for the Prevention of Consumption and other Forms of Tuberculosis has drawn attention to the desirability in this connexion of the better ventilation of railway carriages. The dread of a draught is fortunately not now so great as it used to be. Nevertheless, it is a fact that the necessity of ventilation by fresh air is probably the one principle essential to health which is least appreciated by many persons even at the present time; nor is it sufficiently understood that the partial opening of one window in a compartment implies the most trifling inconvenience to its inmates, while an even freer entrance of air is often desirable in their common interest. A little judicious advice from railway companies on this subject would go far to insure the comfort and the well-being of passengers. On the same ground it is to be hoped that something will be done wherever practicable to improve the existing inlets other than windows and to provide exits in the roof which at present do not exist.

THE FATE OF MISS CAMILLE HOLLAND.

LIGHT seems now about to be cast on the mystery surrounding the disappearance of Miss Camille Holland from Moat House Farm, near Clavering in Essex. On Monday last, April 27th, the persevering efforts of the police, who have for some weeks been digging over the ground in the vicinity of the farm buildings and draining off the water from ditches and ponds, were rewarded by the discovery of a woman's body buried in circumstances which leave no doubt as to the interment having been surreptitious. Several persons who were well acquainted with Miss Holland are said to have identified the remains as being hers and the police, in conjunction with medico-legal experts acting on behalf of the Home Office, may be relied on to make full use of all the material available for arriving at a conclusion. There is satisfaction in the reflection that amid the atmosphere of suspicion which envelopes Miss Holland's disappearance the public have refrained from hysterical denunciation of the man who is charged with attempting to obtain money by forging Miss Holland's name and against whom additional charges will no doubt now be brought. The absolute and incontrovertible identification of a secretly-buried body as that of a person who has not been seen alive for several years may present circumstances of considerable difficulty to the experts whose opinion will be of paramount importance both to the prosecution and to the defence. Strange errors of identification of persons deceased or alleged to be deceased occur from time to time, and have been recorded in THE LANCET, while the long-drawn-out controversy which centred round the Tichborne claimant 30 years ago forms a historic example. These are the cases that lead the law to require overwhelming testimony founded on the most stringent tests before identification is accepted.

INFANT FEEDING AND MILK-SUPPLY.

AT the annual meeting of the Metropolitan Hospital Saturday Fund, which was held at the Mansion House on April 25th, Dr. T. D. Lister delivered an address upon the important subject of infant feeding and milk-supply. The subject is of the utmost importance not only as regards waste of human life but also in respect to the future of the country. For the children of to-day are the fathers and mothers of the future and looking at the appalling infant mortality which exists, the puny stamina of town dwellers, and the denudation of the country districts we are reminded of the words:

> "Ill fares the land, to hastening ills a prey,
> Where wealth accumulates and men decay."

A Budget of nearly 144 millions makes it all the more necessary that the population by whom this enormous sum has to be found should be healthy. Dr. Lister in his address gave his hearers no information which is not perfectly known to most persons who have studied the subject, but he put very clearly and emphatically the loss of infant life by bad feeding, the fact that this loss is mainly due to mothers neglecting either

from necessity—i.e., poverty—or carelessness, the first duty of a mammalian mother—namely, the suckling of the young—and that if children unfortunately have to be artificially fed they should be so fed on fresh cow's milk and not on condensed or preserved milk. He referred also to the great success which has attended the principle of a municipal distribution of clean pure fresh milk and to the very careless manner in which milk is allowed to be sold and stored in the poorer districts of London, while at the same time he gave every credit to those firms which try to supply, and succeed in supplying, fresh clean milk. Here are Dr. Lister's conclusions with which we thoroughly agree :—

In conclusion, the facts seem to show that ignorance of the usage of cow's milk for infant feeding, and ignorance as to the proper handling of milk-supply at every stage, are two great factors in excessive infant mortality.

In the homes we want wider teaching of mothers and potential mothers as to the care and feeding of children. The London School Board has recently made a step in this direction. The printed pamphlet provided by many health officers is of great use, but an organised service of trained women, "health visitors," or "mothers' friends," such as is in existence in certain towns, is of far greater value among the poorest and most ignorant and helpless people. Good cow's milk is a vital necessity to those babies unable to obtain the natural food, but it cannot exactly replace it. Where the poverty is such that skimmed milk, tinned or fresh, is all that can be bought, then proper milk should be provided by public funds, either free or at the cost of the materials. This limitation to the extremely poor involves no trade injustice. It does not matter whether this be done charitably or as a municipal preventive measure against maintaining an increasing proportion of the population damaged by, but surviving, bad feeding in infancy. Many thousands of children are sacrificed annually for want of such provision. If our common conditions compel this reproach, our common interest, no less than our common conscience, should take steps to remove it.

THE annual dinner of the Glasgow University Club will be held at the Trocadero Restaurant on Friday, May 29th, at 7 o'clock. The Rt. Hon. George Wyndham, M.P., the Lord Rector of the University, is announced to be in the chair. Applications for tickets should be made to Mr. James M. Dobbs, Dover House, Whitehall, or to Dr. C. O. Hawthorne, 28, Weymouth-street, Portland-place, W.

Franz Narden Koetter, or Nordenkötter, was brought up at the Bow-street Police-court before Mr. Marsham on April 29th for extradition on charges of obtaining money by false pretence in Germany. His proceedings as an unqualified medical practitioner in Berlin and his flight from Germany to evade arrest were mentioned by our Berlin Correspondent in THE LANCET of April 4th, p. 998.

THE third annual dinner of South African civil surgeons will take place at the Hotel Cecil on Friday, June 5th, the third anniversary of the entry into Pretoria. Sir William Thomson, C.B., will occupy the chair. Tickets, price 10*s.* 6*d.*, may be had on application to the secretaries, Mr. C. G. Watson, 44, Welbeck-street, or Dr. F. E. Fremantle, The College, Guy's Hospital.

Mr. A. G. R. Foulerton has resigned his post as director of the Cancer Research Laboratories at Middlesex Hospital, so that he may have more time to devote to his duties, lately much increased, as director of the clinical and bacteriological laboratories of the hospital. A director will be appointed to devote the whole of his time to the work of the Cancer Research Laboratories.

A CONJOINT conference, convened by the Matrons' Council and by the Society for the State Registration of Trained Nurses, will be held at 20, Hanover-square, London, W., on Friday next, May 8th, at 3 P.M. The question to be considered is the State Registration of Trained Nurses as it affects the Community.

THE May dinner of the Edinburgh University Club of London will take place on May 20th at the Criterion Restaurant. Sir William Turner, K.C.B., principal of Edinburgh University, will be in the chair, and amongst those who have accepted invitations to be present are Sir William S. Church, Sir H. G. Howse, Sir William Huggins, and Sir William Macewen. Members intending to be present are requested to send in their names to one of the honorary secretaries, Dr. James Taylor, 49, Welbeck-street, W., and Dr. G. A. Sutherland, 73, Wimpole-street, W.

THE MIDWIVES ACT.

THE following Memorandum has been issued by the Local Government Board with reference to the Midwives Act, 1902 (2 Edw. VII. c. 17) :—

1. *Object of Act.*—The object of this Act, which, except as otherwise provided, came into operation on the 1st of April, 1903, is to secure the better training and supervision of midwives by the establishment of a system of certification and enrolment of women who are properly qualified to act in that capacity.

2. *Midwives roll.*—The Act accordingly makes provision for the institution of a roll which will contain the names of midwives certified under the Act and for the formation and constitution of a body to be called the Central Midwives Board, who as the central authority for carrying the Act into effect will possess jurisdiction in regard to the issue of certificates and the admission to the roll of midwives and will exercise a general control over the practice of such persons. (Sections 5 and 6.)

3. The Central Midwives Board has been constituted and consists of the following members :—W. J. Sinclair, Esq., M.D., Miss J. Wilson, F. H. Champneys, Esq., M.D., J. W. Cousins, Esq., F.R.C.S., E. P. Young, Esq., M.R.C.S., L.S.A., C. J. Cullingworth, Esq., M.D., F.R.C.P., J. H. Johnstone, Esq., M.P., Miss R. Paget, Miss D. Oldham; secretary, G. W. Duncan, Esq. The temporary office of the Board is at the Privy Council Office, Whitehall, S.W.

4. The Central Midwives Board are to frame rules, subject to the approval of the Privy Council, for the purposes above referred to, and they are also required (amongst other things) to publish annually a roll of midwives who have been duly certified under the Act. (Section 3.)

5. *Definition of midwife.*—The term "midwife" as used in the Act is defined by section 18 as meaning a woman who is certified under the Act, unless the context otherwise requires.

6. *Local supervising authorities.*—The local supervision of midwives is entrusted to the council of every county or county borough throughout England and Wales who by section 3 are made the local supervising authority over midwives within their respective areas.

7. The same section imposes upon each local supervising authority as thus constituted various specified duties in relation to midwives. Their first duty (section 8 (7)) will be to give due notice of the effect of the Act, so far as practicable, to persons at present using the title of midwife. It is understood that the Central Midwives Board contemplate the preparation of a form of notice for the use of local authorities, which will be communicated to them, together with the rules under section 3. The council should forthwith ascertain, so far as possible, the names and addresses of all women in the county who are accustomed to hold themselves out as midwives.

8. The other duties enjoined upon the local supervising authority by section 8 are as follows :—(1) To exercise general supervision over all midwives practising within their area in accordance with the rules to be laid down under the Act. (2) To investigate charges of malpractice, negligence, or misconduct on the part of any midwife practising within their area, and should a *prima facie* case be established to report the same to the Central Midwives Board. (3) To suspend any midwife from practice, in accordance with the rules under the Act, if such suspension appears necessary in order to prevent the spread of infection. (4) To report at once to the Central Midwives Board the name of any midwife practising in their area convicted of an offence. (5) During the month of January of each year to supply the secretary of the Central Midwives Board with the names and addresses of all midwives who, during the preceding year, have notified their intention to practise within their area, and to keep a current copy of the roll of midwives accessible at all reasonable times for public inspection. (6) To report at once to the Central Midwives Board the death of any midwife or any change in the name or address of any midwife in their area, so that the necessary alteration may be made in the roll.

9. *Delegation of powers by local supervising authorities.*—The local supervising authority may delegate, with or without any restrictions or conditions as they may think fit, any powers or duties conferred or imposed upon them by or in pursuance of the Act, to a committee appointed by them and consisting either wholly or partly of members of the council. The provisions of sub-sections (1) and (2) of section 82 of the Local Government Act, 1888, are applied to every committee appointed under this section and to every council appointing the same, and women are made eligible to serve on any such committee. (Section 8.)

10. In addition to the general right thus conferred upon the local supervising authorities of delegating their powers and duties under the Act to committees, the councils of counties are empowered by section 9 of the Act to delegate, with or without any restrictions or conditions as they may think fit, any powers or duties conferred or imposed upon them by or in pursuance of the Act to any district council within the area of the county. It is provided that the powers and duties so delegated may be exercised by a committee appointed by such district council and consisting either wholly or partly of members of the district council, and that women shall be eligible to serve on any such committee. Any expenses incurred by a district council in the execution of any powers or duties so delegated are, to an amount not exceeding such sum as may be prescribed by the county council, to be repaid to the district council as a debt by the

county council, and any excess above the sum prescribed is to be borne by the district council as part of their ordinary expenses. These provisions are made applicable to the administrative county of London in like manner as if each metropolitan borough were a county district, and the borough council were the district council of that district.

11. *Notice by midwives.*—Under section 10 it will be necessary for every woman who is certified as a midwife under the Act, before holding herself out as a practising midwife, or commencing to practise as a midwife in any area, to give notice in writing of her intention to do so either to the local supervising authority or to the body to whom for the time being the powers and duties of the local supervising authority have been delegated under the Act and she must give a like notice in the month of January in every year afterwards during which she continues to practise in the area.

12. This notice must be given to the local supervising authority of the area within which the woman in question usually resides or carries on her practice. A like notice must also be given to every other local supervising authority or delegated body within whose area the woman at any time practises or acts as a midwife, within 48 hours at the latest after she commences so to practise or act.

13. Every notice must contain such particulars as may be required by the rules under the Act to secure the identification of the person giving it. It will be part of the duty of the Central Midwives Board to define, by the rules which that body have to frame as above mentioned, the particulars thus required.

14. In order to insure proper notifications of practice by certified midwives section 10 further provides that if any woman omits to give the notices in question or any of them, or knowingly or wilfully makes or causes or procures any other person to make any false statement in any such notice, she shall, on summary conviction, be liable to a fine not exceeding £5.

15. *Prosecution of offences.*—In addition to the other powers and duties conferred by the Act upon the local supervising authority they are by section 13 authorised to prosecute any offences under the Act punishable on summary conviction. The offences created by section 10 have just been referred to. Attention may also be called to the other offences under the Act which may be prosecuted by the local supervising authority. These are specified in sub-sections (1) and (2) of section 1 of the Act. The first of these enactments provides that from and after the 1st April, 1905, any woman who not being certified under the Act shall take or use the name or title of midwife (either alone or in combination with any other word or words), or any name, title, addition, or description implying that she is certified under the Act, or is a person specially qualified to practise midwifery, or is recognised by law as a midwife, shall be liable on summary conviction to a fine not exceeding £5. Sub-section (2) of section 1 provides that from and after the 1st April, 1910, no woman shall habitually and for gain attend women in childbirth, otherwise than under the direction of a qualified medical practitioner, unless she is certified under the Act; and that any woman so acting without being certified under the Act shall be liable on summary conviction to a fine not exceeding £10. But this section is not to apply to legally qualified medical practitioners or to anyone rendering assistance in the case of emergency.

16. *Expenses and fees.*—Section 15 of the Act provides that any expenses under the Act payable by the council of a county or county borough shall be defrayed out of the county fund or out of the borough fund or borough rate, as the case may be. These expenses will include not only the general expenses of the council themselves as local supervising authority in connexion with the execution of their duties under the Act and the expenses of any prosecutions which they are authorised to undertake as above-mentioned (as well as the expenses, within the prescribed limit, of any district council to whom the council of a county may have delegated their powers and duties under section 9 of the Act), but may also comprise certain sums which the council may have to pay to the Central Midwives Board under section 5 of the Act. That section makes provision for the payment of certain fees to the Central Midwives Board by women who present themselves for examination or certificates as midwives. These fees are to be devoted to the payment of expenses connected with the examination and certificate and to the general expenses of that Board who are required, as soon as practicable after the 31st December in each year, to publish a financial statement made up to that date (which must be certified as correct by a properly qualified accountant) showing the receipts and expenditure, including their liabilities, during the year. The Central Midwives Board must then submit a copy of this statement to the Privy Council and if the statement shows any balance against the Central Midwives Board and the balance is approved by the Privy Council, that Board are authorised to apportion that balance between the councils of the several counties and county boroughs in proportion to the number of midwives who have given notice during the year of their intention to practise in those areas respectively and to recover from the councils the sum so apportioned.

THE ROYAL ACADEMY.

THE one-hundred-and-thirty-fifth exhibition of the Royal Academy will open to the public on May 4th. The number of works on exhibition is 1880, so that a detailed review of the exhibition would be a work of great magnitude. Our own province, however, is mainly to chronicle any pictures which may be of interest from a medical or other scientific point of view. In the first room is a good portrait (30) by Mr. Shirley Slocombe of Sir William Huggins, K.C.B., President of the Royal Society. In Room III. is a fine work by Mr. Herkomer (163), a portrait of Sir Hermann Weber. In Room VI. is a portrait (371) and a good likeness of Lieutenant-Colonel Horace Manders, V.D., R.A.M.C., and in Room XI. Mr. G. Spencer Watson exhibits (777) a very correct if somewhat cold portrait of Sir R. Douglas Powell. Other portraits of medical men are (219) by Mr. C. E. Brock of Dr. J. Storrs Brookfield and (484) of Dr. H. B. Donkin by Mr. Cyrus Johnson.

Of other portraits Mr. Sargeant sends six, of which perhaps the best is (235) Mrs. Julius Wernher, while another (453), G. McCorquodale, Esq., is masterly in its treatment of black. Mr. J. Seymour Lucas sends a strong picture (403) of Dr. William Gunion Rutherford, late headmaster of Westminster, and (432), Mrs. Arthur Blomfield, is a charming work both in colour and pose, upon which both the sitter and the artist, Mr. W. Llewellyn, may be congratulated.

Of figure studies the President, Sir E. J. Poynter, sends among other pictures a virtual reproduction of one exhibited by him last year. This is (160) "The Cave of the Storm Nymphs." Three nymphs are shown in a cave decking themselves with jewels and playing idly with money from a wreck. The modelling and drawing of the foreshortened nymph in the foreground are admirable. In (292) Mr. Arthur Hacker exhibits "Leaf Drift," three very anæmic young women lying upon or in a bed of dead dried leaves. The flesh tints are muddy, but perhaps this is intentional as symbolising autumn, while the attitude of the figure in the foreground who is clasping her right breast is singularly ungraceful. In Room II. three little pictures catch the eye at once. They are hung close together and make a brilliant patch of colour and are entitled "A Romance," by Mr. J. H. F. Bacon (111); "The End of the Chapter," by Mr. Dudley Hardy (112); and "Stones and Crystals," by Miss Catherine Wood (113). All three are well worth notice. Noticeable, too, though in a very different way, is (66) "Dusk," by Mr. G. Clausen, and as a very good pendant to this with its low evening light is (94) "The Coming Day," by Mr. Arnesby Brown. Mr. La Thangue sends five pictures, of which three are Provençal subjects and of these three (133), "A Provençal Winter," with its sunshine, its roses, and oranges, calls up comparisons by no means complimentary to an English April such as we have just undergone. We have left till late perhaps the most striking picture in the rooms—namely, (304), Mr. Albert Goodwin's "Gate of the Inferno," in which the chill grey walls, grim and forbidding albeit seething with fire, the vastness of the buildings, and the weary train of souls all so small and mean, give the spectator that sensation which many have experienced when half awake—namely, of being enormously enlarged in all directions. It will be interesting to compare this conception of the Inferno with that about to be presented on the stage of the Lyceum.

Among the sculpture is (1736) a medallion by Mr. Robert Bryden of Sir F. Seymour Haden, a bust (1753) by Mr. Goscombe John of Sir John Williams, a bust (1848) by Mr. Alfred Drury of the late Sir William Mac Cormac, which is a good likeness, and a bust (1850) by Mr. F. W. Pomeroy of Sir Henry Thompson. A good piece of decorative work is the portion of a church screen (1842) by Mr. W. Reynolds-Stephens. Among the water-colours (815) Mr. Alfred Parsons's picture of a delightful garden makes one envy the possessor thereof, and (812), by Mr. Elkanah Holdroyd, is a careful little drawing of the tomb of Rahere in the church of St. Bartholomew the Great.

MEDICINE AND THE LAW.

The Stamp Duties on Proprietary Medicines.

MR. JUSTICE WILLS on April 24th delivered the reserved judgment of the Divisional Court consisting of the Lord Chief Justice, Mr. Justice Channell, and himself, upon an appeal brought by the Inland Revenue authorities against the decision of a metropolitan police magistrate. The learned magistrate had decided in favour of a firm of chemists that a stamp was not necessary upon a bottle of ammoniated tincture of quinine sold with the following label affixed to it:—

> Ammoniated tincture of quinine B.P., a well-known and highly-recommended remedy for influenza and colds. Dose: one teaspoonful in water every four hours until relieved. Glyn and Co., Chemists, 159, East India Dock-road, E.

The Solicitor-General and other counsel appeared for the appellants and Mr. Asquith, K.C., led for the respondents. The Divisional Court dismissed the appeal, Mr. Justice Wills saying, in the course of a long and learned judgment, "if the article is compounded of drugs or

chemicals as to which there is no secret either of denomination, quality, efficacy, or mode of manufacture; if it is in no sense a proprietary or patent medicine; if the person who originally introduced it to the public is not and no person has become the owner or proprietor, not of the bottle or box or jar in which the compound is sold, but of the mixture or compound itself, so that it is not the common property of all the world, and has never advertised it as a specific or as possessing remedial properties, and if it is made up or sold by a duly qualified person, it is exempt from duty. ..... The whole scheme of the Acts appears to be to strike with chargeability medicines imported from abroad and medicines which particular persons can make to the exclusion of others" (*Times*). It is to be observed that the principal Acts imposing the stamp duties on medicines, the sections and schedules of which the court was called on to interpret, were 42 George III. c. 56, 44 George III. c. 98, and 52 George III. c. 150, and that the first of these Acts recites that an earlier Act (25 George III. c. 79) had been much evaded. That is to say, the policy of affixing a Government stamp to goods claiming to be "proprietary medicines" was initiated more than a century ago and is now carried out under Acts of Parliament nearly 100 years old. That these stamp duties may be a source of revenue is not to be denied. They were presumably never intended to operate in any way for the public good. They do not check, or even tend to check, the sale of quack nostrums which has increased to an enormous and to a dangerous extent. On the contrary, the Inland Revenue stamp upon a box or bottle is often regarded by ignorant people as a form of Government recognition and approval bestowed upon a "remedy" of exceptional excellence, and thus furthers its sale. Indeed, in some cases the quack, who has only to buy the stamps and affix them without any formality being observed or even his name being known, not unfrequently points to them as a guarantee of merit. It may well be asked whether in these more enlightened days the Government of a highly civilised community can be justified in increasing its pecuniary resources by affording an apparent sanction to the sale of nostrums which in many cases are likely to prove injurious to health, and which, even if they are merely incapable of any effect, at all events are used by their vendors to deceive and to rob the poor and the ignorant.

Spitting in Public.

The following by-laws or regulations have been made by the Board of Trade under the powers conferred upon the Board by the London County Tramways Act, 1896:—"1. No person shall spit in, or upon, any carriage used on any tramway worked by the London County Council. 2. Any person offending against or committing a breach of the foregoing by-law or regulation shall be liable to a penalty not exceeding 40*s*. 3. These by-laws or regulations shall come into operation on April 28th, 1903." The efficacy of regulations of this kind necessarily depends to a great extent upon the encouragement given to the officials in charge of vehicles by their employers to enforce them. It would be a convenient addition to the powers conferred in the case of County Council tramways if the police were empowered and encouraged to check a practice which is likely to be increased by the by-laws quoted—that is to say, spitting from the top of a public vehicle upon the roadway or sidewalk. Many who have travelled inside tramcars or omnibuses will have noticed if they have looked through the windows the incessant expectoration which frequently proceeds from someone on the roof above them. This is conducted quite without regard for foot passengers in the immediate neighbourhood of the vehicle and it is highly desirable that it should be stopped for this reason, in addition to those which have at length called some measure of public attention to the dangers arising from a disgusting practice.

Hospitals and their Patients.

In a recent action before his honour Judge Stonor, under the Workmen's Compensation Act, the facts immediately connected with the accident rendering the employers liable were found by the county-court judge in favour of the applicant. An additional ground of defence was, however, also raised—viz., that the injury from which the applicant was suffering was wholly or partly to be attributed to a defect in the treatment of the applicant at St. Mary's Hospital. With regard to this the judge found that the treatment at the hospital was not defective and added that in any case it would have been no defence to the application, as the patient had done all he could in going to the hospital and submitting to the treatment there afforded to him, independently of his having gone there at the desire and with the consent of the employers. This finding seems to be clearly in accordance with justice and good sense so far as it affects the issue between the parties, and so far as it affects the hospital the institution has been cleared from the imputation cast upon it by the employer. It will seem to all connected with hospitals, whether professionally or in respect of their management and the provision of funds for their support, highly undesirable that the treatment provided out of charity to patients unable to pay for medical or surgical aid should be called in question in a court of law because someone subsequently consulted has suggested that some other course might have been adopted. A tendency to take this kind of view of hospital work was recently shown by an applicant at a police-court who complained that a mistake had been made at a London hospital in respect of his case: he was not discovered to be suffering, as in fact he was, from small-pox when he first went to the hospital. The learned magistrate referred the complainant to the county-court, where his remedy, if any, would lie, but at the same time he pointed out the different position occupied by the hospital, which supplies gratuitous aid out of charity, from that of the medical adviser who is paid for his services. It may be added that the man who first goes to a hospital and then, if dissatisfied with his treatment, finds himself able to pay for medical aid, is hardly a member of the class for which hospitals are maintained by the benevolent.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 9304 births and 5031 deaths were registered during the week ending April 25th. The annual rate of mortality in these towns, which had been 15·8, 15·6, and 15·9 per 1000 in the three preceding weeks, further rose to 17·4 per 1000 last week. In London the death-rate was 16·8 per 1000, while it averaged 17·7 in the 75 other large towns. The lowest death-rates in these towns were 4·9 in Kings Norton, 5·4 in Walthamstow, 7·1 in Hastings, 7·3 in Hornsey, 8·3 in Bournemouth, 10·1 in Burton-on-Trent, and 10·7 in Bury; the highest rates were 22·6 in Wolverhampton, 23·8 in South Shields, 24·0 in Bootle, 24·9 in Walsall, 25·2 in Manchester, 25·3 in Salford, 26·5 in Sunderland, 27·8 in Swansea, and 30·7 in Middlesbrough. The 5031 deaths in these towns last week included 504 which were referred to the principal infectious diseases, against 454 in each of the two preceding weeks; of these 504 deaths 168 resulted from measles, 124 from whooping-cough, 66 from diphtheria, 55 from scarlet fever, 51 from diarrhœa, 23 from "fever" (principally enteric), and 17 from small-pox. No death from any of these diseases was registered last week in Hastings, Bournemouth, Reading, Ipswich, Devonport, Burton-on-Trent, Walsall, Handsworth, Kings Norton, or York; while the highest death-rates from the principal infectious diseases were recorded in Hornsey, East Ham, West Bromwich, Aston Manor, Oldham, Salford, Burnley, Middlesbrough, and Swansea. The greatest proportional mortality from measles occurred in Tottenham, Leyton, East Ham, Wolverhampton, West Bromwich, Nottingham, Wigan, Manchester, Middlesbrough, Sunderland, and Swansea; from scarlet fever in Stockport, Bootle, and Rochdale; from diphtheria in Hornsey, Northampton, Hanley, Middlesbrough, and Newport (Mon.); and from whooping-cough in Croydon, Willesden, Manchester, Salford, Oldham, Bradford, and Swansea. The mortality from "fever" and from diarrhœa showed no marked excess in any of the large towns. Of the 17 fatal cases of small-pox registered in these towns last week six belonged to Liverpool, three to Oldham, three to Burnley, and one each to Hanley, Leicester, Birkenhead, Bury, and West Hartlepool. The number of small-pox cases under treatment in the Metropolitan Asylums hospitals, which had been 11, 13, 15, and 33 on the four preceding Saturdays, had further risen to 38 on Saturday, April 25th; nine new cases were admitted during the week, against three, five, and 22 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of last week was 1698,

against numbers decreasing from 1798 to 1662 on the six preceding Saturdays; 243 new cases were admitted during the week, against 205, 158, and 188 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 238, 234, and 262 in the three preceding weeks, further rose last week to 280, but were 36 below the number in the corresponding period of last year. The causes of 65, or 1·3 per cent., of the deaths in the 76 large towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Bristol, Leicester, Nottingham, Manchester, Newcastle-on-Tyne, and 42 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, St. Helens, Warrington, Middlesbrough, Sunderland, and South Shields.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 18·0, 17·6, and 17·7 per 1000 in the three preceding weeks, further rose to 18·5 per 1000 during the week ending April 25th, and showed an excess of 1·1 per 1000 over the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 13·9 in Perth and 14·5 in Paisley, to 17·9 in Edinburgh and 20·3 in Glasgow. The 605 deaths in these towns included 30 which were referred to whooping-cough, 18 to diarrhœa, four to measles, three to "fever," two to scarlet fever, and two to diphtheria, but not one to small-pox. In all, 59 deaths resulted from these principal infectious diseases last week, against 57, 64, and 53 in the three preceding weeks. These 59 deaths were equal to an annual rate of 1·8 per 1000, which was slightly above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had declined from 37 to 17 in the four preceding weeks, rose again last week to 30, of which 22 were registered in Glasgow, four in Edinburgh, and two in Greenock. The deaths from diarrhœa, which had been 14, 11, and 17 in the three preceding weeks, further rose to 18 last week, and included eight in Glasgow, three in Paisley, two in Edinburgh, and two in Dundee. The fatal cases of measles, which had been 12, 14, and seven in the three preceding weeks, further declined last week to four, of which two occurred in Aberdeen. The deaths referred to different forms of "fever," which had been four, eight, and two in the three preceding weeks, rose again to three last week and were all registered in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 121, 98, and 109 in the three preceding weeks, further rose last week to 129, but were 32 below the number in the corresponding period of last year. The causes of 16, or nearly 3 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 27·1, 23·7, and 24·5 per 1000 in the three preceding weeks, further rose to 24·8 per 1000 during the week ending April 25th. During the past four weeks the death-rate has averaged 25·0 per 1000, the rates during the same period being 16·0 in London and 19·0 in Edinburgh. The 180 deaths of persons belonging to Dublin registered during the week under notice were two in excess of the number in the preceding week and included eight which were referred to the principal infectious diseases, against 15, 16, and six in the three preceding weeks; of these, two resulted from scarlet fever, two from diphtheria, and one each from small-pox, measles, whooping-cough, and "fever," but not one from diarrhœa. These eight deaths were equal to an annual rate of 1·1 per 1000, the death-rates last week from the same diseases being 1·9 in London and 1·1 in Edinburgh. The fatal cases of scarlet fever, which had been two, one, and two, in the three preceding weeks, were again two last week. The deaths from diphtheria, which had been six, two, and 0 in the three preceding weeks, rose again last week to two. One death from small-pox was registered last week, a fatal case having occurred in each of the four preceding weeks also. The 180 deaths in Dublin last week included 25 of children under one year of age and 54 of persons aged 60 years and upwards; the deaths of infants showed a slight decline, while those of elderly persons were in excess of the number in the preceding week. Three inquest cases and four deaths from violence were registered, and 65, or more than one-third, of the deaths occurred in public institutions. The causes of eight, or more than 4 per cent., of the deaths registered in Dublin last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Surgeons: P. W. MacVean and E. D. J. O'Malley to the *Porpoise*; H. C. Ross to the *Bellona*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel D. Bruce is selected for special employment in Uganda. Captain D. E. Curme is ordered to Devonport for duty. Major H. E. Winter is ordered to Devonport for duty in the Western District.

MENTIONED IN DESPATCHES.

In despatches published in the *London Gazette* of April 24th relating to operations in Northern Nigeria and the northern territories of the Gold Coast the names of Dr. Grant, Colonial Surgeon P. M. Tobit, and Assistant Colonial Surgeon P. J. Garland are mentioned.

THE SOMALILAND CAMPAIGN.

The British forces operating in Somaliland under General Manning have had a hard and trying time, with severe fighting, want of water, climatic heat, and exhausting marches. Mr. Balfour's prediction made a little time ago that the expedition would prove a dangerous and costly undertaking is being verified. The "Mad Mullah" is showing a good deal of military method and some tactical skill in his madness. Colonel Plunkett's column, detached from Colonel Cobbe's camp, was attacked by an overwhelming force of Somalis and practically annihilated. Among the numerous officers who lost their lives on that occasion we notice the name of a young medical officer who was only appointed to the Indian Medical Service in July last—Lieutenant Francis Wheler Sime. It is estimated that 2000 Somalis were slain before Colonel Plunkett's small force was overcome. Colonel Cobbe's position in these circumstances naturally became very serious, but his force was afterwards relieved and rescued. Another sharp fight also took place on April 23rd not far from General Manning's headquarters at Bohotle in which the British were compelled to retire after losing two officers and 13 men killed and four officers and 28 men wounded. What with the loss of officers that has taken place and the long waterless track which has to be traversed it seems problematical whether the advance of the force can be continued for the present. The fanatical bravery of the tribesmen, the alleged failure in "stopping power" of the service ammunition, notwithstanding that the Somalis were described as mown down in heaps by the Maxims and rifle fire, the topographical obstacles of the country, the long line of communication necessary, and the difficulties connected with a sick transport in a body of troops moving in the formation of a square and fighting its way along in a forced retreat—all these make the expedition a very arduous one.

LEAN'S ROYAL NAVY LIST.

The 102nd quarterly issue of the Royal Navy List, which has just been issued by Messrs. Witherby and Co., of High Holborn and Newton's-court, Cornhill, contains, besides the usual authoritative information regarding the war and meritorious services of officers of the Royal Navy and of the Royal Marines and Royal Naval Reserve and other matters of interest regarding our first line of defence, a carefully compiled record of the current history of the Royal Navy. Promotions, retirements, and appointments are brought up to March 31st.

Dr. Herbert Tilley has been appointed Examiner in Laryngology to the Royal Army Medical College.

Lieutenant-General Miles, in his report to the War Department of the United States on the misconduct of Americans in the Philippines, confirms many of the stories of cruelty in which American officers were said to be concerned.

CARDIFF INFIRMARY.—April 26th was observed in Cardiff as Hospital Sunday when collections were made at 150 places of worship in aid of the funds of the Cardiff Infirmary. In 1902 the sum raised amounted to £295, but this year it is hoped that a much larger sum has been collected.

Looking Back.

FROM

THE LANCET, *SATURDAY*, APRIL 30, 1825.

REVIEW.[1]

An Essay on Venereal Diseases, and the uses and abuses of Mercury in their treatment; illustrated by Drawings of the different forms of Venereal Eruptions. By RICHARD CARMICHAEL, M.R.I.A., Vice President of the Royal College of Surgeons in Ireland, &c., &c. London, 1825. 8vo. pp. 376, 2d Edition. Longman and Co.

The venereal disease is said to have made its first appearance in Europe toward the end of the fifteenth century, viz. about the year 1494 or 5, and to have spread in the same manner and with the rapidity of the pestilence. It is pretty plain, however, that the various accounts which have reached us respecting its origin are but so many fables, and that what has been said respecting the siege of Naples, and the crews of Columbus is equally devoid of foundation. Ulcers on the genitals are mentioned by many ancient writers,—Greek, Roman, and Arabian; and in the annals of England there is the clearest proof of the existence of one form, at least, of the venereal disease. It was the subject of legal provisions as early as the year 1162, "which laws (says Webster) are still extant, and were then only a renewal of those *which were still more ancient.*"

In the records of the Lordship of Winchester, there are many regulations respecting the stews which were authorized to be kept in Southwark, one of which expressly prohibits any "stew-holder to keep any woman that hath the *perilous infirmity of* (brenning) *burning.*"*

In a book written from a manuscript about 1430, in possession of the Bishop of Winchester, one article begins thus:

"De his qui custodiunt mulieres habentes nephandum infirmitatem," it goes on, "*Item*, That no stew-holder keep noo woman wythin his hous that hath any sickness of *brenning*, but that she be put out, upon the peyne of make it a fyne into the Lord of a hundred shillings." ARDEN also, who was physician to Richard II. and Henry IV., between 1377 and 1413, speaks of a "certain inward heat and excoriation of the urethra." This disease was called a *burning*, and went by that name till the middle of the 16th century.

Here gonorrhœa is obviously described, and there can be no fallacy respecting it. We are satisfied that this disease is essentially different from syphilis; but we cannot dwell upon the topic now, as it is rather irrelevant to the subject under consideration.

The same author (Arden), says Beckett, "takes notice of those contumacious ulcers which we now call chancres; and the great trouble our ancient authors found in attempting their cure sufficiently discover them to have had their original from a venereal infection." ..... Nodes on the shins were also known, and were termed by the old English writers the boon, or bone hawe, "a name (says Beckett) which gives a perfect idea, not only of the part affected, but after what manner it was diseased, for the old English word *hawe* signified a swelling of any part." But there is not the shadow of a doubt that a species of this disease existed in England as early as the Norman Conquest, and probably in other countries of Europe. Not a medical work of that period, however, if any was written, has survived the ravages of time.

It is said, by European authors, that this disease was prevalent among the natives of America when the Spaniards first visited the country. It is somewhat strange, however, that ULLOA, in his voyage to South America, Book 6th, declares, that "the venereal distemper is seldom known among the natives," although so common among the Spaniards as to have lost the infamy attached to it in other countries.**

* *Burning* is a modern orthography, the ancient was *brent, brenning*—so Chaucer wrote it. Canterbury Tales, 2427, and in other passages,—

"The fires *brent* upon the auter bright
"That it gan all the temple for to light,"

** See Philosophical Transactions, No. 357—Badham's Memoirs, vol. vi. 390—Webster, vol. ii. 440—Astruc de Morbis Venereis, vol. ii. 4to, par. 1740. This author is particularly elaborate. We are not sure that Moses does not allude to some form of the venereal disease, in Levit. cap. xv. See also Duncan's Med. Commen. xiv. 254, et alibi.

[1] Only a portion has been transcribed.

Correspondence.

"Audi alteram partem."

RITUAL CIRCUMCISION.

To the Editors of THE LANCET.

SIRS,—The remarks in the annotation in THE LANCET of April 25th, p. 1181, concerning ritual circumcision are very important. The subject has always had the most anxious consideration of the ecclesiastical authorities of the Jewish faith, amongst which people this religious observance is regarded with the greatest veneration and is universally observed. Unfortunately sad occurrences have recently taken place in connexion with it, to which a great deal of publicity has been given and in consequence the reports have in many instances been much exaggerated. As a matter of fact, it is surprising, considering the number of cases of circumcision which are constantly being performed, how few are the mishaps that occur. But however few, nevertheless, it is a very serious matter and is so regarded by everyone, and especially by those who have the control and supervision of this religious ceremony, which has been observed for thousands of years and is undoubtedly a simple operation, and when performed skilfully and with proper antiseptic precautions is quite free from danger.

There exists at the present time a medical board composed of qualified and registered medical practitioners whose duty it is to teach and to train all those who are destined to perform the religious rite and also who are deputed to be in attendance upon and supervise all cases performed by anyone who is not himself a qualified surgeon. This board is appointed to guarantee that all operations are skilfully performed and that proper antiseptic precautions are observed in accordance with the teachings of modern surgery. It is hoped and anticipated that with this supervision strictly enforced unfortunate occurrences will no longer be heard of in connexion with the performance of this most ancient and widely-spread religious observance.

I am, Sirs, yours faithfully,
M. CLIFFORD, L.R.C.P. Lond., M.R.C.S. Eng.

Clifton gardens, W., April 28th, 1903.

To the Editors of THE LANCET.

SIRS,—I have read with interest your annotation upon the above in THE LANCET of April 25th, p. 1181. I also think I am at liberty to tender my experience after 21 years of professional work in the East-end of London. I have invariably made it my duty to be present at such ceremonies, especially in my maternity cases, and thus formulate my experience as follows: (1) the sucking of the glans penis as formerly practised is now all but given up; (2) the custom of ejecting a mouthful of wine over the penis is almost extinct; (3) the use of disinfectants or mild antiseptics is becoming general (a weak solution of carbolic acid is invariably used before and after the operation by means of a syringe called a "spritza"); and (4) the medical man is more often invited to be present on the occasion either by the "Mohelim" or parent.

I have taken upon myself to recommend certain Mohelim after watching the way they perform the operation. In many instances the medical man's opinion is sought, either by the Mohelim or by the parent, as to whether the infant is in a fit state of health to undergo the operation, it being a special religious feast to which not only friends and relations are invited, but likewise the medical attendant receives an invitation. It is more amongst the poorer class that these preventable accidents arise incidental to the circumcision. I would therefore advise that the presence of the medical man be insisted upon at all these religious ceremonies. I have frequently been called by the Mohelim to witness the operation. So far as my experience goes I have not had occasion to be called into many serious after-results demanding either medical or surgical aid. I am, Sirs, yours faithfully,

Mile End-road, E., April 27th, 1903. M. CURSHAM CORNER.

THE ABORTIVE TREATMENT OF SMALL-POX.

To the Editors of THE LANCET.

SIRS,—I shall esteem it a favour if you will allow me to make one or two observations on the interesting letter of Mr. L. W. Seymour, which appeared in THE LANCET of April 18th, p. 1127, on the above subject. Mr. Seymour suggests that the internal administration of carbolic acid is preferable to the outward application because it gets more directly at the cause, while the latter acts indirectly through the manifestation of the disease. I should like to point out that the rash of small-pox is not a manifestation of the disease in the same sense as the rash, say, of typhoid fever. I am of opinion that whatever may be the method by which the poison gains entrance to the body the microbe becomes deposited in the skin, as well as certain mucous membranes, and there produces colonies in a similar manner to the colonies which develop in a gelatin plate culture and that the development of these colonies gives rise to the characteristic rash. The severity of a case of small-pox is proportionate to the amount of the rash which develops in its course. Before the introduction of vaccination inoculation of the disease was practised. For that purpose the fluid from a vesicle was used and therefore that fluid contains the germs of the disease. Again, I think the most infectious period during the course of the disease is when the scabs are falling off, for it is then that minute particles of dried epithelium, &c., can be taken up in the air and carried even long distances.

If the above views be correct it seems to me that the outward application of a powerful germicide is more likely to destroy the poison and to render the patient less dangerous to those around him than the internal administration of a weak solution thereof. I am doubtful if the internal administration of carbolic acid with quinine, however beneficial the mixture may be in the treatment of the disease, can produce such an efficient disinfection of the resulting scabs, and the skin generally, as the local application of pure carbolic acid. Mr. Seymour says there must be a combination of the above drugs, and neither singly will give the result. But pure carbolic acid alone, applied externally, will give the result and, I contend, disinfect the skin more effectually. Since sending you the clinical note on this question in February last I have treated two other cases; one was severe but discrete and the other was an ordinary discrete case. Neither patient had been vaccinated since infancy and the result of the treatment in both cases was marked and satisfactory.

I am, Sirs, yours faithfully,

April 25th, 1903. JAMES T. NEECH, M.D. Durh.

THE RELIEF OF PARALYTIC DISTENSION OF THE BOWEL IN OPERATING FOR INTESTINAL OBSTRUCTION.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of April 11th, p. 1055, under the above heading Mr. C. A. Morton says that "if a portion of bowel has been very severely nipped it may be paralysed and unable to take on peristaltic action, even though the intestine above is not too distended to force the contents down to it, and it has been taught that this very limited paralysis may cause persistent obstruction after herniotomy. But, granting that the bowel so damaged may be paralysed, is it conceivable that the peristaltic wave in the proximal side cannot force the contents through a few inches of inert gut?"

This is a very important question and my experience leads me to agree with those who teach that "a few inches of inert gut" may cause a persistent obstruction. In fact, when the conditions described arise it seems to me that the chances are very strongly in favour of a complete valvular obstruction developing after a mechanical constricting obstruction has been relieved. The mode in which the small intestine is attached to the posterior abdominal wall is well calculated in normal conditions to prevent obstruction in that part of the bowel. In normal healthy conditions the bowels are not greatly distended, but if any part of the small intestine becomes unduly full the mesentery of that portion is stretched into an irregular wavy fan-shape and although the coil cannot be straightened it is made to assume a gentle curve at the distal end of its mesentery. The flow of its contents round this curve is easy. A portion of the gut lower down then becomes distended, its mesentery is stretched, and the difficulty is gradually surmounted.

But the size of the abdominal cavity and the disproportion between the length of the mesentery at its attachment to the spinal column and that at its attachment to the bowel limit the length of any one coil of intestine, so that if there are several distended coils together the gut at the end of each coil must bend sharply, so as to recross the abdomen at the end of another fan-shaped portion of the mesentery. The angles thus formed may be very acute. They become more acute as the intestines become more distended and it is at these angles that kinking from over-distension occurs when the muscle of the intestinal wall begins to lose its tone. It is obvious that the drag on the mesentery would tend to make a curve even if the gut were inert. But when a piece of bowel which has not lost its peristaltic power distends it must push the ends of its coils against the boundaries of the peritoneal cavity formed by the abdominal walls and any piece of gut which is paralysed and inert must be bent at a sharp angle to an active piece of distended bowel with which it is continuous. Hence an inert piece of bowel must form a valvular obstruction and the more active the peristaltic efforts to overcome this obstruction are the more firmly will the inert piece of bowel be pressed upon and held at an acute angle to the end of the adjacent coil in which the power of making peristaltic efforts continues.

In these circumstances the fate of the patient depends on the ability of the surgeon to give the "few inches of inert gut" a sufficiently long rest to enable them to recover their tone by preventing for a time the efforts of the intestine above to propel its contents downwards. This may be done by emptying the gut and sewing up the opening or openings made in it or by making a fistula. These methods have dangers of their own but if the surgeon does not resort to one or other of them and does not resect the gut there seems to me to be no reason for expecting any but a fatal issue in the circumstances premised by Mr. Morton. Operations for obstructions of the intestine are probably the most fatal in surgery. When the nipping of a piece of bowel is not so severe as to paralyse the part there are good grounds for hoping that the relief of the obstruction will cure the patient. Hence it is important to operate early and the results of operations for hernia are exceedingly good if surgical aid is called for promptly. When the gut is paralysed at the seat of obstruction and the part above is also completely paralysed by distension the chances of recovery are very remote in any circumstances of treatment. Between these two conditions there may be a period in which the nipped bowel is paralysed but the bowel above retains its peristaltic function and in these circumstances I cannot agree with Mr. Morton that the formation of a fistula is an unreasonable method of treatment. A very great difficulty which Mr. Morton has not touched upon is the recognition of the state of the bowel which has been nipped as regards its power of peristaltic activity or its power of quickly recovering its tone.—I am, Sirs, yours faithfully,

Portman-street, April 21st, 1903. JOHN D. MALCOLM.

CANCER "CURES."

To the Editors of THE LANCET.

SIRS,—With reference to your annotation on "Cancer Cures" in THE LANCET of March 14th, p. 745. I have recently learnt that when the writer of the article in the *Pall Mall Gazette*, entitled "A Triumph of Electricity," wishes to support her views she is in the habit of quoting in detail a case of mine affecting a gentleman whom I will call Mr. A. The lady in question does not hesitate to use both his name and mine freely in writing what she is pleased to call "private" documents intended to get into the hands of public characters. As the account thus given is full of errors will you permit me to tell the truth about the case, which really is of some interest?

Eight years ago I removed from Mr. A.'s left cheek a large and thick-based epitheliomatous ulcer. This growth has *not* recurred. But two or three years ago a small ulcer appeared on the lower lip and I excised it. Recurrence took place in the site of this. It is essential to remember that Mr. A. has suffered for years from a chronic inflammatory thickening of the mucous membrane of both cheeks and of the lower lip and that he has been a considerable smoker. There

is no history of syphilis, but I thought it worth while to give him iodide of potassium for a time. The journalist suggests that my treatment caused him to lose all his teeth. I never gave him mercury and the teeth he lost were some removed by the dentist because they were in contact with the ulcer. The gums were very unhealthy. While Mr. A. was under the iodide the lady journalist urged him to go to Mr. E. A. Cloete Smith for high frequency current treatment, and she insinuates that I perversely told him to go to a member of the staff of my own hospital. I did nothing of the kind. The patient thought the name recommended was Mr. *Curtis* Smith, and as I know no such person I told him to go to Dr. F. Harrison Low, who has never been a hospital colleague of mine. She states that the x rays were used by Dr. Low to the great injury of the patient, causing the ulcer to slough, &c. In truth, the x rays caused a great improvement in the general condition of the mouth, cleaned the surface of the ulcer and softened its base, but did not diminish its size until the moment arrived when the journalist persuaded the patient to leave Dr. Low for Mr. Cloete Smith. I saw Mr. A. a fortnight ago. The ulcer is now smaller, especially in the long diameter, which now measures only half an inch as against four-fifths originally. The patient is in good health and spirits. I said to him, "If I were you I should have the x rays used to this sore occasionally." Mr. A. replied: "Oh yes, Mr. Cloete Smith does use the x rays to it occasionally." So it appears that the despised x rays have not been discarded altogether in favour of the high frequency current.

I need not add that it is not certain that this ulcer is carcinomatous. Not every ulceration of the mouth which complicates leukoplakia is malignant. Nevertheless, this ulcer had quite sufficient clinical signs of malignancy and I have no wish to deprive either the x rays or the high frequency current of any credit due to them. I believe this ulcer was malignant in character, but peculiarly favourable for such treatment as can be given by electricity or light or other ways, owing to its small size and unusually thin base.

I am, Sirs, yours faithfully,

Grosvenor-street, W., April 23th, 1903. C. B. KEETLEY.

FREE ANTITOXIN.

To the Editors of THE LANCET.

SIRS,—It is now nearly six years since the then vestry of Camberwell established the first laboratory of municipal bacteriology in the United Kingdom; and to me, as the first official appointed to the charge of such a department of sanitary work, it is a matter of both interest and amusement to note how from time to time the credit of priority in this or that branch of the work is claimed for one or other sanitary authority. We *began*, for instance, with the free distribution of diphtheria antitoxin which has been recently claimed in your columns by Hanley—a claim subsequently sought to be set aside in favour of Guernsey, though we made it a plank in our platform at the very start.

Latterly the Local Government Board auditors have been disallowing antitoxin items, but with the help of my brother, Mr. W. R. Bousfield, M.P., and of Dr. T. J. Macnamara, M.P., I have succeeded in obtaining from the President of the Board his sanction to the continuance of the supply—at all events for the present.

I am, Sirs, yours faithfully,

EDWARD C. BOUSFIELD, D.P.H. Camb. and Lond.,
Bacteriologist to the Borough of Camberwell.

Old Kent-road, S.E., April 27th, 1903.

OPERATION IN SUPPURATIVE DISEASES OF THE EAR.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of April 25th, p. 1197, there appears a letter on the above subject by Mr. F. Faulder White in which it is said: "But we are to swallow the camel in the five-hour operation of Mr. Ballance and at the same time to reject the gnat in the common-sense and often absolutely necessary minor operation of ten minutes' duration." The rebuke contained in the well-known verse from Holy Writ (Matthew xxiii. 24) has no sort of application to the matter at issue and the passage is, moreover, inaccurately cited. What specially struck me, however, in the sentence of Mr. White was the expression, "the five-hour operation of Mr. Ballance." The operation recommended by Mr. Ballance has not taken five hours to execute when I have seen it done. If Mr. White really thinks that it does occupy five hours in execution he can never have seen the radical mastoid operation performed by a competent operator.

I am, Sirs, yours faithfully,

April 27th, 1903. CHARLES D. GREEN.

THE STUDY OF VENTILATION.

To the Editors of THE LANCET.

SIRS,—It is now more than 43 years ago since I dropped my first communication to you in the Editor's letter-box. It was done at midnight with much doubt and diffidence. It was a report with remarks on a case of wound of the pericardium and heart substance which had recently been admitted into University College Hospital under the care of the late Sir John Erichsen, whose house surgeon I was at the time. To my surprise and delight you published my poor essay *verbatim*.

I now venture to intrude on you on the great subject of hygiene. From the year 1846 to 1852 I was a constant attendant on the House of Commons as one of the ventilation staff. My late father's vacuum system was alone in use in the temporary House, the combined vacuum and plenum movements being in the present House. I thus early became acquainted with practical methods of ventilation. Shortly after having been appointed to the sole professional charge of the Geelong Hospital (200 beds) I became aware of the fact that anyone, rich or poor, could at any time demand attention for a scratch but that there was no provision for the reception of infectious cases. Many a poor woman was sent away with her child suffering from measles or scarlet fever and refused admission. Indeed, the rules distinctly refused to take in such cases and the afflicted one had to be taken home there to spread the disease. Shortly after the visit of the late Duke of Saxe-Coburg (then Duke of Edinburgh) to Geelong the mayor of the town proposed that the visit should be marked by the erection of an Alfred memorial ward in the extensive grounds of the hospital. Believing that the mayor and I were anxious on the same question I immediately sent him my contribution. The mayor, however, was far more interested to provide a suitable abode for lunatics on remand instead of sending them to gaol, while the committee of the hospital had an idea of housing old and incapable women now accumulating in the hospital. Subscriptions coming in freely it was resolved to combine the three schemes in one building separate from the general hospital but in its grounds. The south end was to be appropriated to supposed lunatics, the north end to elderly and incurable women, while the centre was to be laid out as fever wards (male and female) and necessary annexes. Architects were employed and there was no difficulty in the old women's ward nor in the accommodation for lunatics, but the word ventilation in connexion with my idea raised a storm and its source was singular. It originated with a burning and zealous follower of John Knox, who believed only in God's air which naturally came through doors and windows. Air coming up in vast quantities without draught from a properly prepared chamber was rather to be considered as "*blasts from h—l*" than as "airs from heaven." He was frantically opposed to my scheme and so also, but in a less loud manner, was the Episcopalian minister. They had their followers. I had a glass model prepared about five feet long of a large ward ventilated on the vacuum system, the motive power being a strong spirit lamp placed rather higher than the ceiling and at the foot of a glass chimney. Smoke was used to illustrate air movements. (I had seen Her late Majesty Queen Victoria with Prince Albert and accompanied by King Louis Philippe, Queen Marie Amélie, and Princess Clémentine looking at the working of a similar model in my father's experimental room while listening to his explanations.) My model prevailed. I showed that it was next to impossible for air to escape from the fever wards without passing through fire, thus rendering it free from all germs and destroying all chance of contagion spreading abroad. The building was made and the ventilation proved a success. Four severe epidemics of scarlet fever, measles, diphtheria, and typhoid fever severely tried it. Not only were all the beds filled but stretchers had to be placed between them and some were accommodated on the floor. I kept up an abundant supply of fresh air and kept the fire in the shaft going rather furiously night and day. The mortality was notably less than usual. Not one case of contagion was noted after years of experience.

I notice that the most ignorant of the subject are the most

pompous and dogmatic on the ventilation question. I once went, at the instigation of some members, to inspect the ventilation arrangements of the Victorian Parliament Houses, architecturally one of the finest buildings in the world. The first thing I noticed was a row of holes somewhat like spittoons between the Treasury bench and the table. I was gravely informed that carbonic acid being heavier than air fell to the bottom and that these holes were so placed as to let it escape and keep the Ministers in a purer atmosphere than the rest. I was quite satisfied and left hurriedly.

I am, Sirs, yours faithfully,

D. BOSWELL REID, Brigade-Surgeon-Lieutenant-Colonel, Victorian Military Forces (retired list);

For 30 years chief surgeon of the Geelong Hospital, Australia; formerly Demonstrator of Anatomy and Operative Surgery, University College, London.

April 25th, 1903.

A NEW ORDER OF NURSES.

To the Editors of THE LANCET.

SIRS,—May I, as a nurse, crave a portion of your valuable space to say a few words in answer to "R. A. R.'s" letter on the above subject in THE LANCET of April 4th, p. 991? It is only natural for a medical man to wish to provide "a scientific practical nurse" for patients under his care at a price within their means, but has he thought of the nurse's side of the question? A "scientific practical nurse" cannot be produced without at least three years' training; she cannot enter on this training before from 23 to 25 years of age at the best training schools, 21 at the minor hospitals. It follows that she cannot begin to earn her living as a trained nurse until she is from 24 to 28 years of age at the earliest. At 40 years of age she will find it difficult, and at 45 almost impossible, to obtain work as a nurse. Her working days are at the longest from 12 to 20 years and in those years she must save enough to provide for herself when they are past. If during the whole 20 years she were never out of work, took all her own fees, and had but four weeks' holiday a year, the utmost she could earn at £2 2*s.* a week would be, in round figures, £100 per annum. If, after paying for her holiday, clothing, and everything else, she saved £50 a year she would do wonders and have at the end of 20 years' hard and continuous work the sum of £1000, bringing her in at 3 per cent. just £30 a year to stand between her and starvation. But to do even this she must never leave off work for illness, family calls, or any other reason, during the whole 20 years and must always be able to command £2 2*s.* a week. The great majority of nurses have nothing but their own earnings to depend on; many help to support relatives; can they, ought they to be asked to, work for less than a sum which, even with the greatest care, can only just produce enough to keep them out of the workhouse when too old to work any more?

Cheap nursing must either be unskilled labour or if skilled must be provided for by charity, either directly by subscribing to institutions for providing nurses at reduced fees to people who cannot afford to pay the nurse a living wage or indirectly by supporting the nurse when her working days are over, who has worked for fees which have made saving an impossibility.

I am, Sirs, yours faithfully,

April 10th, 1903. A NURSE.

CERTIFYING FACTORY SURGEONS.

To the Editors of THE LANCET.

SIRS,—I shall be glad to hear the opinions of certifying factory surgeons as to the fees paid under the present Factory Act. In my opinion the fees are not only extremely low, but derogatory to the profession. The sixpenny fee for each examination at the surgeon's house is surely degrading and in the case of accidents 2*s.* 6*d.* to perhaps 5*s.* for a thorough investigation at the works, followed by a visit to the injured person and a long written report, appears most inadequate remuneration for the time and labour expended. If the general opinion is in accordance with these views, is it not possible for the Association of Certifying Factory Surgeons to draw up a petition signed by all certifying surgeons and to approach the Home Office with a view to improving the position?—I am, Sirs, yours faithfully.

April 25th, 1903. M.R.C.S., L.R.C.P.

THE FOURTEENTH INTERNATIONAL CONGRESS OF MEDICINE.

(FROM OUR SPECIAL CORRESPONDENT.)

THE OPENING CEREMONY.

Madrid, April 24th.

THERE can be no doubt that a large theatre, like, for instance, Covent-garden or Drury-lane in London, lends itself admirably to such a ceremony as the opening of a great international congress. Everyone present must have been greatly impressed by the wonderful aspect of the interior of the Teatro Real on Thursday afternoon, April 23rd. All the scenery and side wings had been removed from the stage and it was walled round to its farthest extremity with magnificent tapestry. The carpet at the farthest extremity, which was of about the size of a small house, was of a gorgeous crimson tint, with the arms of Spain in the centre. This formed a resplendent background to the scene. The flooring of the stage sloped down to the stalls and on to the extreme end of the pit, making one vast sloping surface. In about the centre of the stage three long tables, placed so as to be slightly arched and covered with red velvet and gold braid, constituted the presidential bureau. In front a space was left clear; behind and to the right and left were stalls for the official delegates and representatives of foreign Governments. On the side of the open space that faced the Royal box a tribune or small platform had been erected which the speakers were called upon to ascend by the major-domo or leader of the protocol who was arrayed in a magnificent uniform and whose imposing presence added much to the impressiveness of the ceremony. At the centre of the table sat the Prime Minister, Señor Silvela, wearing the blue scarf or band of the Order of Carlos III., supported on his right by the Minister of Public Instruction, who wore the crimson scarf of Cristo de Portugal. Then there were Professor Brouardel with the Grand Cross of Isabel the Catholic, Dr. Calvo with the Order of Alfonso XII., and Dr. Cortejarena in grand uniform. On the left of the Prime Minister sat the Bishop of Madrid-Alcalá, Professor von Leyden, and Dr. Dubois, official representative of Belgium. All round on the stage were the leading notabilities of the Congress and among them the red gowns of the English attracted great attention, materially assisting in giving life and colour to the scene.

In front of the stage and throughout the whole house every seat and every inch of standing room were densely packed with members of the Congress and any number of other persons who somehow or other had gained admittance. It was intended that all the members of the Congress who were not on the stage should be in the body of the house—namely, the part usually occupied by the stalls and pit. But this was not done and consequently many members of the Congress were driven for want of room right up into the gallery, where they were crushed and crowded on those most uncomfortable seats which, during operatic performances, are occupied by what are popularly termed "the gods." Great was the heat and great was the sense of relief when, within a few minutes of the appointed hour, the strains of the Royal anthem announced the approach of the King. Of course, when His Majesty Alphonso XIII. entered the Royal box, accompanied by the Queen Mother, the whole house rose and cheers were given in welcome of the Royal presence. After bowing acknowledgments the King took his seat and the Prime Minister at once opened the proceedings. He called upon Dr. Julian Calleja, President of the Congress, to read his inaugural address. Of course, Dr. Calleja's first remarks were to acknowledge gratefully and gracefully the help which the patronage of the King and Queen Mother had been to the organisers of the Congress. Then he addressed himself to the learned visitors from other countries, pointing out that the splendour and renown of many of the Spanish monarchs were founded on science. "The glories of our learned men and of the golden age of our history cannot be forgotten. Though some may ignore what we have done in the past our national genius is a genius possessing an ample spirit that can freely discern and day by day, more and more, it forms a centre full of life and toleration, of scientific harmony

This facilitates all progressive reform." Dr. Calleja then went on to express his opinion that what was known as modern medicine was based on experiment and research rather than on tradition and that in this the learned men of all countries had coöperated. But the modest practitioners who exercised their profession with intelligence and rectitude converted themselves into inexhaustible sources, accumulating facts and evidence on which the great geniuses of the age based their laborious discoveries. The legacy which the last century had left was as rich in promises as in realisations, and they had for mission to bring about the fulfilment of the latter. Dr. Calleja then reviewed the progress made in biology, in pathology, etiology, &c. It became more and more evident that the organism did not fall ill spontaneously, but that there must be a receptivity; hence both poisons and remedies acted very differently according to the individual. Thus it was not the wound but the poisoning resulting from the presence of bacteria that made so many operations fatal. Therefore they had to treat the surrounding atmosphere as well as the patient. Then, in regard to internal illnesses, sanitation had removed many of the causes and the future was with the sanitary reformer. In conclusion, Dr. Calleja expressed his fear that they would not be able to organise the present Congress as well as its brilliant predecessors, but that it was impossible to doubt that its scientific value would be great when they noted the distinguished men whom it had brought to the capital of Spain.

Now followed the long succession of short speeches from the representatives of the different nationalities. But first of all the general secretary of the Congress gave the statistics of membership. He could not say how many were actually present in Madrid, but the following was the number of members who had subscribed and enrolled themselves. There were: from Germany, 776; Australia, 7; Argentina, 45; Austria, 258; Belgium, 98; Bosnia, 3; Brazil, 25; Bulgaria, 4; Colombia, 2; Cuba, 13; Denmark, 35; Egypt, 12; United States of America, 195; France, 826; Great Britain, 238; Greece, 6; Hayti, 1; Italy, 235; Japan, 4; Luxembourg, 4; Mexico, 25; Norway, 51; Holland, 21; Russia, 297; Santo Domingo, 2; Roumania, 21; Servia, 9; Switzerland, 35; Turkey, 11; Uruguay, 3; and Venezuela, 18. The official delegates nominated by various Governments amounted to 474. The total membership amounted to 6961, of whom 3530 members were Spanish and 3431 belonged to other nations. The number of communications or papers which these members had announced amounted to 1681. These figures spoke with sufficient eloquence as to the importance of the Congress.

As far as possible the speakers were selected in the alphabetical order of their respective nations, though Dr. Dubois, the Belgian delegate, spoke before the representative of Austria. He congratulated the secretary-general on the statistics just given out. He had himself helped to organise an international congress and knew from experience how great were the difficulties.

Dr. Pacheco, from the Argentine Republic, followed the Belgian representative and was much applauded when he saluted Spain as his mother country. Dr. Leyden having spoken for Germany Dr. Schrötter spoke for Austria. He alluded to the relationship that had united the reigning families of Austria and Spain for more than a hundred years. He also mentioned discoveries made by Spanish medical men while studying at Vienna and concluded by urging that science was universal and not restricted by frontier demarcations. Dr. Petroff, chief surgeon of the Alexander Hospital of Sofia, expressed in French gratitude on behalf of the Bulgarian Government and people. Dr. Cobbler for Bosnia also spoke briefly and gracefully. The delegate from Chili had a powerful voice and a dramatic delivery. He spoke in Spanish and alluded to his love for the mother country. He saluted in the name of his country the great soldier and poet Ercilla and contrived so to weld the Chilian Republic with the Spanish Monarchy as fairly to bring down the house. This gave some warmth and life to the proceedings which up to that moment had certainly been very impressive but also very formal and somewhat lacking in animation.

Dr. Santos Fernández from Cuba was afflicted with a sore-throat and could not be heard. As his position was somewhat difficult there was a fortunate aspect to this little indisposition. Of course he spoke in Spanish but so did the next representative, though he came from Denmark. The latter alluded to a remark that had been made by the late King Alfonso XII. that charity did not recognise any frontier.

There now occurred an incident which might produce very unpleasant consequences if not carefully explained. The United States of America came next on the list for, in Spanish, the term "Estados Unidos" is employed, and the letter E follows the letter D (Danemark). Therefore a speaker from the United States was requested to ascend the platform. An awkward pause ensued; the request was repeated, still there was no reply and it was necessary to pass on to the next speaker and nationality. It will readily be seen that this silence might be diversely interpreted. Was it the Americans who did not wish to speak or the Spaniards who were anxious that they should not speak? Needless to say that neither of these suppositions is in any way founded on fact. The Americans present were very anxious to be represented on this occasion and wanted to manifest their friendly feelings. The American delegation had met under the presidency of Dr. Howard A. Kelly of Baltimore, who acted as chairman in the absence of Dr. A. Jacobi who was unfortunately too ill to attend. It was decided that Dr. Kelly, or, in his absence, Dr. O'Reilly, surgeon-general of the United States Army, should speak on this occasion. Dr. O'Reilly accordingly attended at the opening ceremony but could not approach the platform. Through some misunderstanding he had not secured the right sort of ticket and was therefore unable to get through the great crowd. It may be urged that there has been some blundering but it is quite certain that there has been no ill-feeling whatsoever. I was present at a private meeting of a large number of the American members of the Congress and though they were undoubtedly much disappointed they were very anxious that no mischief should be made out of the incident, for they were absolutely convinced that no affront whatsoever was intended on either side.

It was fortunate that France followed next, for the popularity and eloquence of Dr. Brouardel helped to efface the awkwardness of the situation. He alluded to his previous visit to Spain when in 1898 he attended the International Congress of Hygiene and was then able to appreciate the cordiality of the Spanish Government and people. He spoke of the progress of science from Jenner to Pasteur and said that these great men were an honour and glory to all nations. He further insisted on the great efforts which had been made to cope with consumption as shown by the congresses held in Berlin and London on tuberculosis and by the forthcoming congress on that subject which is to meet in Paris next October.

Now followed Dr. Pavy as representative of Great Britain and he was one of the very few representatives who failed to speak either in French or Spanish, consequently his remarks were only understood by a very small section of the audience, otherwise his assertion that knowledge is power would have elicited greater applause. He insisted on the importance of such scientific gatherings as the present Congress and expressed his thanks to the King and Government that had rendered such a meeting possible. He had also some graceful remarks to make to the medical men and people of Spain for their help in the work undertaken by the Congress.

Dr. Clado, the Greek representative followed, speaking in French, but the Italian, like the English delegate, spoke in his own language. This, however, was a safer experiment for, of course, in Madrid Italian is much better understood than English. Dr. Maragliano, indeed, was much applauded. It was true, he claimed, that the Spaniards were a brother people to the Italians, going so far, in his desire for fraternity as to declare that the history of Italy and Spain was the same. But these exuberances are pardonable on such occasions. Now came the Japanese delegate, Dr. Honda-Tadan. It appears that he spoke in German but with so peculiar a pronunciation that not a few persons thought it was Japanese. Dr. Silva y Valencia followed, however, in the Spanish language on behalf of Mexico which he maintained was Spanish in origin, language, religion, and customs, and his enthusiasm so carried him away that, forgetting all about the Monroe doctrine, he declared that he wished that the frontiers of Spain were extended to Mexico.

Dr. Homboe from Norway and Dr. Sibkel from Holland both spoke in French, the latter alluding to Velasquez and Rembrandt, while Dr. Costa from Portugal began his speech in Spanish and finished it in French. Dr. Thiron from Roumania claimed that the Roumanians were a Latin race like the Spaniards.

Dr. Morgewoy from Russia and Dr. Subbotk from Servia spoke in French, while the representative from Sweden spoke in Spanish. As a proof that no grievance should be

made in respect to the absence of a speaker from the United States of America, the same misfortune now occurred in regard to Switzerland, Turkey, Egypt, and Uruguay, for all these nations were invited to send up a speaker and none responded. But to finish off the alphabet we did have a few words from Dr. Rizquez on behalf of Venezuela.

All the nationalities having thus had their say, it was the turn of Dr. Blondel to speak on behalf of the medical press. He pointed out that the formation of an International Association of the Medical Press had been accepted as a principle by the Paris Congress of 1900; the details had been settled at the Monaco Conference of 1902, and the Statutes had now been definitely adopted by the Congress of the Medical Press which had met in Madrid and concluded its labours that morning. In the history of the movement they should henceforth talk of the Statutes of Madrid, and in commemoration of this successful issue and as a mark of gratitude for the help received in Spain, Dr. Cortezo had been elected President of the International Association of the Medical Press. This compliment was well received and gave rise to enthusiastic applause.

Now the Prime Minister, Señor Silvela, rose to reply on behalf of the King and Government of Spain. His voice was well heard throughout the huge house and he spoke with great animation. In the name of his nation he expressed his gratitude to the great and the wise men who from all parts of the world had honoured Spain by their presence in Madrid. They were not guests and strangers but old friends. If not known personally they were known by their books and achievements. The science of medicine was so eminently human that all the other sciences readily lent their help. The noble purpose of medicine was to postpone death, to maintain the intelligence, heart, and life of humanity. By thus sustaining man himself progress in every other department would be best assured. Every science solicited the help of medical science; it was the foundation of general happiness. To-day they realised this more forcibly than formerly. In the moral and political sciences and even in jurisprudence they depended on medical science; otherwise how could they distinguish the criminal from the madman. How could justice be done? How could the State accomplish its function if medical science did not enlighten the judge? Such congresses as the present were the visible public manifestations of modern science. Formerly science could only be found at the universities, and still further back humanity had to rely on the alchemists. Now, there was the great difference that science was no longer selfishly restricted to a university or a nation. It had become really universal and like the light of the sun it shone for the benefit of mankind in all parts of the world. Señor Silvela concluded in declaring the Congress open in the name of His Majesty Alfonso XIII. Thereupon the whole audience rose and turned towards the Royal box. Various shouts in different languages were heard, but the predominent cries were, "Viva el rey!" "Viva España!" "Viva la ciencia!" and then the vast audience gradually dispersed.

THE ROYAL RECEPTION AT THE PALACE.

Madrid, April 26th.

Thursday, the 23rd, as already described, was devoted to the opening ceremony and on Friday, the 24th, the Congress sat only in the morning. There was no meeting in the afternoon as the King had selected that time to receive the members of the Congress. Though the palace is very large, nevertheless it was feared that the crowd would be too great if the ladies accompanying the members of the Congress were also invited. There was, however, no inconvenient crush and the only difficulty that arose was due to the want of a sufficient number of cloak-rooms. Three o'clock in the afternoon was the hour appointed for the Royal reception, but long before that time a file of cabs and carriages and the assembling crowds indicated what was about to happen. The palace is a huge quadrangular building covering 26,900 square yards and inclosing a large inner court. It took some 30 years to build and was first occupied by Carlos III. in 1764. Very appropriately it had been arranged that the various nationalities should be grouped in different rooms so that in passing through the suite of saloons the King would make a journey round a world of science. Thus the Austrian, German, and Russian members of the Congress were gathered together in the throne room where they had leisure to admire the elaborate decorations and the bronze statues of Mercury and Jupiter which stand as sentinels on each side of the throne. In a smaller saloon called the Antecámara de Gasparini the English members were gathered together. This and the larger room beyond bear the name of the Italian artist who did the decorations. The ceiling is of porcelain and there is most artistic and luxurious furniture. In the next saloon stood the French members and beyond in the Salón de Carlos III. were the members from Guatemala, Belgium, Brazil, Mexico, Japan, and Holland, constituting a somewhat confusing mixture. The Portuguese had a small room to themselves, while the vast State dining-rooms, which consist of three compartments or rooms divided by arches, were filled with members from Sweden, Norway, Denmark, Cuba, United States of America, Uruguay, China, San Salvador, Turkey, Switzerland, Costa Rica, Venezuela, Colombia, Paraguay, Siam, Chili, Ecuador, Nicaragua, and Greece. Finally, all the apartments occupied by the Infanta Isabel were given over to the Spanish members of the Congress.

It was through this vast array of saloons, filled with expectant visitors, that the Royal party had to pass, stopping to be introduced to some of the notabilities of each nation and to exchange a few friendly words. The King commenced with the room where the Germans, Austrians, and Russians were grouped together. His Majesty was accompanied by the Prime Minister, Señor Silvela, the Minister of the Interior, the Minister of Public Instruction, and various palace officials. He wore a captain's uniform, the Order of the Golden Fleece, and various crosses and military Orders. The ambassadors of the various nations were present to make the different presentations and the King was able to speak to the Germans in German, to the English in English, and to the French in French; while, of course, he reverted to his own language when, after a lengthy peregrination, he reached the apartments occupied by the Spanish members of the Congress. In the British section Sir Mortimer Durand, G.C.M.G., the British Ambassador, first presented Sir Henry F. Norbury, K.C.B. (the Director-General of the Royal Navy Medical Service), Lieutenant-Colonel Crombie, C.S.I., I.M.S., and Major J. McCulloch, R.A.M.C., of the War Office. Sir Henry Norbury then presented Mr. Pember Reeves, Agent-General for New Zealand; Mr. Alfred Gregory, delegate from Cape Colony; Mr. Great-Rex, the representative of the Metropolitan Asylums Board; Dr. F. W. Pavy, F.R.S., President of the National Committee for Great Britain and Ireland of the International Congress of Medicine; Sir W. H. Broadbent, Bart., Sir Thomas Barlow, Bart., Sir Dyce Duckworth, M.D., Sir John Moore of Dublin, Dr. P. H. Pye-Smith, Professor Murdoch Cameron of Glasgow, Dr. G. B. Ferguson (ex-president of the British Medical Association), Dr. D. Ferrier, F.R.S., Dr. J. C. Ogilvy Will of Aberdeen, Mr. Jessop, Dr. Wiglesworth, Dr. H. Radcliffe Crocker, Dr. Tyson, Dr. F. M. Pope, Dr. R. Shingleton Smith, and Dr. J. Swain. The presentation of each was made pleasant by the unaffected manner of the King who spoke a few words of welcome either in English or French to each person. When His Majesty had left the audience room, Her Majesty the Queen Mother, accompanied by her daughter, came in and allowed many presentations to be made to her, asking that she might see all the English delegates who were in attendance. As the King left the saloon an English cheer was raised in his honour. Needless to say he has greatly changed since 1898 when last I saw him in very similar circumstances. He was then but a little boy and his mother, as Queen-Regent, did all the talking and this, too, in many languages. Now we had before us a tall, thoughtful-looking youth, who presented himself as the King, surrounded by his Ministers, and no onger under the guidance of any parent. But the Queen Mother also honoured us by her presence, though she came ten minutes or a quarter of an hour later, forming a separate procession, and accompanied by the Countesses of Sástago, Mirasol y Torrejón and Her Royal Highness the Infanta Dóa María Teresa. Not only the Queen Mother but the ladies of her suite all engaged in active conversation with the members of the Congress and on some occasions they did not wait to be introduced. If the King has greatly changed in appearance I was much surprised to find that the Queen Mother still retains her graceful and youthful figure. On all sides I heard expressions of sympathy for the Queen Mother whose difficult position and dramatic life constitute a pathetic picture that cannot fail to awaken respectful and kindly feelings.

Dr. Calleja, Dr. Ulecia, Dr. Benavente, Dr. Recasens, Dr. Tolosa Latour, Dr. Decref, Dr. Larra y Cerezo, and Dr.

Fernandez Caro formed a committee of reception and, posted in different parts of the palace, helped to conduct the members to their respective places. In this manner several thousand visitors were marshalled about and the most complete order prevailed throughout. When the Royal party had passed out of a saloon then the occupants were, as it were, liberated and could begin to wander about and to visit different parts of the palace. The vast colonnade that surrounds the inner court was hung on both sides with a magnificent and unique collection of tapestry which is several centuries old. Some of these carpets are said to have been made after designs by Albert Dürer. Another carpet is attributed to Raphael. In any case they are very artistic productions and some of them have designs of deep symbolical meaning. Then close at hand there is the Royal armoury which was also thrown open to members of the Congress. It was Charles V. who founded this collection and it has now become one of the richest in the world. For 300 years now every monarch has sought to increase its importance. But in all these works of art nothing can be found as beautiful and impressive as the view to be obtained from the Palace windows, right over the plain to the snowclad Guadarrama mountains, at the foot of which the Escorial nestles like a bird's nest at the foot of the lower hills. Here is the plain, fruitful in parts, arid in others, through which the Manzanares passes—that fickle river which at times only displays a dry bed and at others overflows its banks. Here are the marvellous variations and effects of colour that Velasquez loved to study, and here, indeed, the pomp of State may bow with reverence before the grandeur of nature.

After the Royal Family the Government sought to welcome the members of the Congress who were invited to a grand reception held at the Ministry of Foreign Affairs on Saturday evening. I believe this was a brilliant gathering but as through some mismanagement my invitation did not reach me I can say nothing about it. The Ayuntamiento or municipality of Madrid has also thrown the town hall open to the Congress and here a cheerful but very overcrowded reception was held. The town hall is an interesting building of the seventeenth and eighteenth century but is altogether too small for great receptions. There are some historical paintings relating to the War of Independence, one very fine Goya, together with some interesting Flemish tapestry. Also a court has been covered over and converted into a winter garden, and in these rooms and on the majestic staircase, to the sounds of music, the members of the Congress crowded together, meeting old friends and indulging in all sorts of gossip and criticisms.

To-day, Sunday, there have been several breakfasts given. That at the Equitable Insurance Offices lasted till three in the afternoon and then most of the guests had to leave under the penalty, if they lingered longer, of losing their places at the bull fight. At the same time another breakfast lunch was being given by Dr. Castillo de Piñeyro who has a new hospital for women in the suburbs of Madrid. Other similar entertainments have taken place and altogether the delegates to the Congress are unanimous in recognising the widespread hospitality and kindness that have been shown to them by the Spanish authorities and people.

WORK AND CONFUSION IN THE SECTIONS.

April 25th.

There were wild scenes at the stations on the Wednesday morning. The trains came in overflowing with passengers. Not a seat was vacant and this rendered the fatigue of travellers greater than usual. Nor was this the case only at the Northern station. Many members of the Congress had elected to make excursions in Andalusia, to visit Seville, Granada, Cordova, &c., before the Congress, and a large party of American delegates came over from the United States to Gibraltar, whence they travelled northwards to Madrid. Thus it was not at one but at all the stations that the utmost confusion prevailed. Nor were matters any better on the following day, as the members still came pouring into the town, arriving at the very last hour and on the very day of the opening ceremony. On the morrow—namely, Friday morning—the various sections commenced work, but here, also, the confusion was great. For instance, Dr. A. van Chuchten of Louvain was appointed reporter in the Sixth Section (Neuropathy and Criminal Anthropology) and should have read a paper on the Question of Physical Retrogression or Degeneration. This was duly printed in the programme of the Congress but when Dr. van Chuchten presented himself the President of the section declared that he had no knowledge of him or of his report and sent him away. On the other hand, Dr. W. Byron Coakley (Chicago) had been specially invited by the late Professor Virchow of Berlin to attend the Congress and to read a paper in the Surgical Section on his method and instrument for injecting solutions into the vital organs. He notified his readiness to do so last November and was not a little surprised to find that he was not inscribed on the printed programme. He called on the President of the section, who assured him that he would be welcomed and his paper heard on the morrow. Dr. Coakley consequently transferred his weighty apparatus to the Surgical Section. Here, however, he was told that he must wait and finally that he must return the next morning. This he did, to be again postponed. Nettled by this treatment he went over to the Physiological Section and there he was well received and allowed to read his paper and to show his instrument at once. The result was an immediate invitation to demonstrate its action at the Spanish Faculty of Medicine.

The attendance in the Sections of Surgery, Medicine, and Pædiatrics was large but in some of the other departments there were but few members. The Section of Surgery was chiefly concerned with a discussion on the subject of the production of anæsthesia by the injection of cocaine into the lumbar region of the cord. Papers on the subject were read by Dr. José Spreafico of Almeria and by Dr. Reclus of Paris who took the wider subject of the employment of quinine in general surgery. In the Section of General Pathology Dr. E. Doyen read an interesting paper on the micrococcus neoformans in connexion with new growths. In the Section of Public Health Dr. F. Bushnell read an interesting paper advocating the appointment of ministries of public health.

Mr. W. H. H. JESSOP (London) read a paper in the Section of Ophthalmology on the Prognosis in Cases of Glioma of the Retina after Operation. He based his remarks on 83 cases of glioma which he divided into intra-ocular and extra-ocular, the intra-ocular cases being those in which the disease did not invade the nerve beyond the lamina cribrosa. He then deduced the fact that in intra-ocular cases the prognosis was good if excision were performed. All the intra-ocular cases, except a doubtful one in which the nerve was "apparently not involved," had been successful. This was also true of binocular cases in which the affection of the second eye could not be looked upon as a recurrence but as a new and separate form of disease. It was also shown in three extra-ocular cases in which the optic nerve was invaded that if the nerve were divided at the time of the operation behind the invaded portion the result was good. This seemed to indicate that in all cases of excision of the eye for glioma the nerve should be divided as far back as possible—at least 10 centimetres, or better 15 centimetres, must be removed. It was very seldom that an operation could save the patient's life in the extra-ocular stage except in the early nerve cases mentioned above.

In the Section of Medicine Sir DYCE DUCKWORTH contributed a case of Infective Endocarditis successfully treated by rectal injection of anti-streptococcic serum. The patient was a boy, aged 15 years, who was admitted to St. Bartholomew's Hospital suffering from pains all over the body and a rash resembling erythema multiforme of wide distribution. His illness began with daily rigors and pyrexia ten days before admission. The family history was unimportant. There was no manifest visceral disease but a systolic bruit was heard at the apex of the heart. Successions of rigors occurred at irregular intervals and fresh crops of eruption appeared on the trunk and limbs, sometimes with vesicular and petechial manifestations. There was occasional vomiting. Later there was an effusion into the left knee-joint. Cultivation of the fluid from this and from the blood proved negative. The cardiac murmur varied in quality at the apex and hæmic soufflés were heard in the pulmonary artery and in the aorta. Various joints became painful but there was never any indication of a splenic or renal infarction. The pyrexia was severe, with daily high flights, and the rigors returned at irregular intervals. For many weeks the appetite remained good, but it presently began to fail and the boy was steadily losing ground. No benefit was derived from treatment by salicylate of sodium, quinine, fresh brewer's yeast, oil of gualtheria, or calomel. The yeast was given daily in full doses and hypodermic injections of 10 cubic centimetres of anti-streptococcic serum proved of no avail. It was determined, therefore, to

administer the serum in doses of 10 cubic centimetres per rectum daily. Within ten days there was a marked improvement and this continued steadily. The appetite improved and within a fortnight the pyrexia had passed off. The cardiac systolic murmur remained. No more rash appeared. The boy was sent to the country at the end of July. When he was next seen, in September, he was in perfect health and the cardiac sounds were normal. The rectal injections were continued for about five weeks and for some time after the subsidence of the pyrexia. The diagnosis at first was erythema multiforme of a severe character dependent upon rheumatic infection. The condition remained so long rebellious to ordinary treatment and the pyrexia assumed such a grave form, with irregular rigors, that it became evident that a malignant or virulently infective quality pertained to the disease. It was a question whether a small septic wound on the arm or the endocardium was the source of mischief. The cardiac condition appeared not to explain the case. The influence of daily rectal injections of 10 cubic centimetres of mixed anti-streptococcic serum proved the turning point in treatment and the results were very obvious and decided. The success was so marked that Sir Dyce Duckworth had since employed this method in another case of infective endocarditis, but without benefit. Some of Sir Dyce Duckworth's colleagues at St. Bartholomew's Hospital were inclined to attribute the good result to the use of fresh yeast, but no real relief was afforded until the rectal injections took effect. This case may have been an example of a virulent rheumatic infection—that is to say, one in which the ordinary toxin assumed, as it is believed to do sometimes, a special malignant quality.

Dr. ROBERT BELL read a paper on the Causation of Cancer and its Treatment without Operation. He believed that the predisposing causes of cancer were persistent and prolonged retention of fæces containing an undue proportion of decomposing albuminous material from which entero-toxins, a poisonous substance produced in the intestines, were derived and by absorption conveyed to the blood. The blood thus contaminated produced a depraved condition of the nervous system which handicapped the functional activity of the various organs, interfering with cell metabolism and eventually culminating in anæmia in young persons or cachexia in the elder. If the functions of the thyroid gland were at fault these toxins might produce various mischiefs. If saccharomycetes were present in the blood this toxic material was liable to undergo chemical changes and these to result in the formation of uric acid when uricacidæmia would result. The presence of these toxins in the blood, alone or combined with uric acid, exerted a pernicious influence upon cellular structures and conferred upon them a predisposition to take on a malignant change. Prolonged or repeated irritation of a part was liable to rouse into malignant activity cells which might otherwise have remained dormant. The vitiated condition of the blood, by frustrating the physiological vitality of the various organs and cellular structures and paralysing the *vis medicatrix naturæ*, afforded every facility for the new growth to establish its identity and to increase its area at the expense of its environment. Dr. Bell concluded his paper in the following terms: "We must not rest satisfied with the possibility of neutralising the effects of the entero-toxins by the administration of thyroid extract. An endeavour should also be made to destroy the saccharomycetes which we know are almost invariably present in cancerous subjects, for if their presence is permitted to continue their effects upon the entero-toxins will be perpetuated. The most potent destructive agent upon these bodies with which we are at present acquainted are the salicylates. It follows, therefore, that in conjunction with thyroid extract it is desirable to administer a salicylate in some form and thus to remove the chief factor in the production of uric acid. At the same time, constipation, which permits of the absorption of entero-toxins, must be relieved. The line of treatment to be adopted consists in causing the bowels to be relieved completely once in 24 hours, the dietary to be modified so as to be composed largely of milk food, thyroid extract to be administered in five-grain doses three times a day with 10 or 15 grains of salicylate of sodium or aspirin, and finally, all local affections to be so treated as to remove all sources of excitation."

AN EXCURSION TO TOLEDO.

So many of the papers are read in Spanish that the English members of the Congress have not attended in any large numbers. A good many of the English section left Madrid early in the morning for an excursion to Toledo. They were amply repaid by a thorough exploration of the wonderful fortress town situated on a rock and nearly surrounded by the river Tagus. The Cathedral, one of the most magnificent in Spain, occupied much time. It presents a sober character such as must have been borne by York, or Canterbury, or Durham 300 years ago and is singularly free from the tinsel decorations which are so common in many Roman Catholic countries. The Chapel Royal, decorated externally with the votive offerings from the Moors of the fetters from which they had been relieved, was also visited and it was difficult to believe in the perfection of detail that it had not been built recently. The day's excursion was completed by a visit to the celebrated factory where the Government arms are made, a trade which has rendered the name of Toledo famous throughout the world. In the evening the President of the Council of Ministers, corresponding to our Prime Minister, held a reception at which the official delegates were received. The gathering was extremely brilliant on account of the various uniforms and decorations worn by the guests, whilst the interest was heightened by the magnificence of the suite of rooms in the Ministry and by the beauty of the pictures which adorned them.

IMPRESSIONS OF THE FOURTEENTH INTERNATIONAL CONGRESS OF MEDICINE, MADRID, 1903.

A correspondent has sent us the following account of his personal experiences, showing that the confusion and discomfort witnessed by our Special Correspondent in many cases were not universal:—

Madrid, April 23rd.

A large contingent of English, Scotch, and Irish visitors have assembled in Madrid for the purpose of attending the Fourteenth International Congress of Medicine. The courtesy of the Spaniards, who extended their invitation to ladies, has been fully appreciated and very many members have brought their wives and daughters. The routes to Madrid are so numerous that there has been very little strain upon the railway accommodation and travellers have been able to avail themselves of the rapid and comfortable journey through France. Leaving Charing Cross by the 2.20 train on Monday our party crossed an absolutely calm Channel and were able to enjoy the excellent dinner provided in the express which reached Paris at 10 o'clock. A night spent in the newly built and sumptuous hotel of the Orleans railway on the Quai d'Orsay refreshed the party for the long journey through the flat scenery of mid-France by the Sud express which travels mile after mile at the rate of 70 miles an hour. The journey was without incident except for a thunderstorm with vivid lightning between Bordeaux and Bayonne. The frontier was crossed at Irun where the little band of travellers passed through the custom-house, exchanging the corridor train for the sleeping cars which carried them whilst they slept to a height of 3000 feet above the sea. With the morning came a splendid panorama of wide plains, bounded by snow-capped ridges, the near distance being formed by the massive remains of the granite boulders brought by ancient glaciers which formed logan or rocking stones enough to attract tourists from all parts in a more populous country. The train toils upwards for many hours until a height of more than 4000 feet is reached when there is a rapid descent past the Escorial, or old burying place of the kings of Spain, to Madrid itself which lies at a height of 2300 feet above the sea level. The weather had not differed in the least from that in England and France. A biting north wind was blowing and there were continual squalls with heavy rain.

When the hotel had been safely reached the first journey was naturally to the Congress. The provisional rooms were placed in the National Library, where the accommodation would have been ample if it had been properly allotted. By some error, however, only a very small part of the space was utilised and the number of attendants was insufficient. There was the greatest difficulty, therefore, in obtaining tickets and it was found impossible by many members to obtain what they wanted. The following day presented the same scene of confusion, but there is very little doubt that in time matters will settle down and the affairs of the Congress will proceed in a satisfactory manner.

INTERNATIONAL CONGRESS OF THE MEDICAL PRESS.

The Second International Congress of the Medical Press was opened on April 20th in the buildings of the Central University under the presidency of the Minister of Public

Instruction. The *Heraldo*, the principal Madrid paper, has an interesting little article written by Dr. A. Munos giving some account of the medical press in general. The article is illustrated by portraits of Professor Cornil, who was

DR. ANGEL DE LARRA, SECRETARY-GENERAL OF THE INTERNATIONAL MEDICAL PRESS.

President of the First International Congress of the Medical Press, of Mr. Adolphe Smith (the representative of THE LANCET), of Dr. H. Adler (editor of the *Wiener Medizinische Wochenschrift*), and of Professor Posner (editor of the *Berliner Klinische Wochenschrift*). The article concludes with a welcome to these and the other representatives of the medical press.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

A Record in Plague Mortality.—Plague at the Delhi Durbar.—The Government of India and the Pasteur Institute at Kasauli.—The Improvement Scheme for Calcutta.

THE mortality from plague throughout India for the week ending March 28th has established a still higher record—over 32,000 deaths having been reported. Bombay city returned 1583 deaths, the Presidency 7268, Calcutta 816, and the Bengal Presidency 3628. The Punjab shows a sudden increase to 16,837 deaths, and the United Provinces returned 3799. The other affected provinces are Central India with 739 deaths, Central Provinces 1134, the Mysore State 225, Berar 487, Hyderabad 751, and Rajputana 192. The worst places in the Bombay Presidency are Belgaum, Kolhapur, and Satara; in Bengal, Saran, Patna, Monghyr, Muzzaffarpur, and Darbhanga; and in the Punjab, Amritsar, Hoshiupar, Jullunder, Lahore, and Umballa.

Now that the Delhi Durbar is all over news is published to the effect that ten cases of plague occurred during the festive fortnight. They were distributed over eight of the camps and with one exception were in men of low caste who had arrived in Delhi in good health but who had sickened immediately after going into camp. As I have before reported, ample arrangements were made for emergencies of sickness and these cases were promptly dealt with. No other cases were reported afterwards, a fact which is strong proof that the disease can make little or no headway against a population living an open-air life.

The Government of India has granted certain concessions in the case of Government servants proceeding to the Pasteur Institute at Kasauli for treatment who may be bitten by a rabid animal while in the execution of any public duty. Any Government servant whose pay does not exceed Rs. 30 a month and any European constable and other European employed in the police department drawing not more than Rs. 100 a month will be allowed his actual travelling expenses there and back. An advance of one month's pay will be given as will also one month's casual leave.

Considerable opposition is likely to arise against the proposed improvement scheme for Calcutta. It is felt that the expense will be enormous and altogether out of proportion to the results to be anticipated. To spend over £4,000,000 sterling on 15½ miles of roads, even if some of them do open up congested areas, can hardly be considered a great sanitary scheme when so many other matters call for more urgent attention. Those who know Calcutta will agree that nothing short of its gradual reconstruction will remove the evils so well known and so much complained about. The European portion of the city has greatly improved, although the presence in it of native bustees is, to say the least, an anomaly, but it is in the northern half of the city that some very radical improvements must now be made. The corporation has many things in hand but beyond the road scheme there is nothing promised like the great works going on under the Bombay trust.

April 10th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Medical Officership of Health.

THE health committee has now decided the terms under which it recommends the city council to advertise this position. It is proposed to offer a salary of £1000 per annum and to limit the competition to candidates under 45 years of age. It asks permission to select one candidate for election by the council and it expresses the opinion that personal canvassing of the committee by candidates should be prohibited. In addition to the gentleman whose name I mentioned in my last letter several other candidates, and amongst them two who have occupied the position of superintendent of the City Fever Hospital, are in the field. When the post is actually advertised, as it will shortly be, we may expect further additions to this list.

The Health Committee and Practitioners.

In my last letter I mentioned that there was some slight friction between the health committee and the general practitioners of the city respecting the decision of the former to send an official of its own to confirm or to refute diagnoses of chicken-pox and small-pox. This matter has now been amicably settled. The health committee has promised to discontinue the practice of sending the medical superintendent of the Small-pox Hospital to visit cases notified as chicken-pox. On the other hand, the medical practitioners, through the local union, have assured the health committee of their perfect willingness to call in the gentleman in question in any case in which the slightest doubt is possible. This seems to be a very satisfactory termination of what might have been a disagreeable and contentious matter and the Medical Practitioners' Union is to be congratulated upon the concession which it has obtained. Some time ago the health committee appointed lady visitors as members of its staff and recently there have been rumours that some of these officials have been acting in a way by no means in harmony with the traditions of the medical profession. I understand that in one case, which is now being investigated by the committee, it is alleged that the lady visitor herself took the child of a well-to-do mechanic, whose father could easily have paid a medical man's fee, to the Medical Mission and there obtained treatment gratuitously. It is to be hoped that this and other allegations of a somewhat similar nature will be thoroughly inquired into and that the practices complained of—if found to have occurred—will be promptly put a stop to. I notice in THE LANCET a statement that the Hanley sanitary authority has recently decided to distribute diphtheria antitoxin gratuitously to members of the local profession requiring it and that this is claimed as the first instance of such a procedure on the part of a sanitary authority. Another of your correspondents claims

the same distinction for the States of Guernsey, but for the credit of the Birmingham health committee it is my duty to point out that it has been distributing this remedy gratuitously for five years. The examinations of suspected cases of diphtheria are carried on in the bacteriological laboratory of the university. When a practitioner sends a swab for examination he forwards with it a printed form on which he supplies particulars of the case, his own name and address, &c. On this form is a place for the practitioner to say whether he desires antitoxin or not in case the diagnosis is a positive one. If he expresses a wish for it and the swab shows that the case is one of diphtheria, with the diagnosis are sent to him two doses of antitoxin and a sterilised syringe, so that treatment may be commenced at the earliest possible moment.

The Small-pox Epidemic.

The efforts of the health committee to prevent this plague from making headway in the city have so far been very successful. Last week only one patient was admitted to the hospital. During this week four patients have been admitted, but as others have left there are now only 45 under treatment. As the disease is prevalent in all the districts around the city there can be no doubt that fluctuations in the number of admissions to the hospital are bound to occur for some time and that it will be wholly impossible absolutely to stamp out the disease within our boundaries. The committee is taking all possible steps in connexion with the epidemic. A few weeks ago a new fire-proof pavilion was opened at the new fever hospital, raising the accommodation for small-pox patients to 85. As the fluctuations in the number of cases then showed a downward tendency, the overtime and Sunday working—which had been thought necessary in connexion with this pavilion—were stopped in connexion with another which will, however, be shortly ready. When it is finished there will be ample accommodation for 120 patients.

Medical Practitioners' Union.

I have mentioned this very active organisation, of which Mr. James Neal is the honorary secretary and moving spirit, in connexion with the dispute between the profession and the health committee. The Union runs a very interesting little monthly paper, the *Midland Medical Journal*, edited by Mr. Neal, and it contains articles of medical interest as well as others more closely concerned with the ethical and business sides of the profession. In connexion with this organisation there has recently been issued a "Code of Ethics" which has been adopted by its members. The regulations contained in this code, which, it may be said, are excellent and thoroughly clearly expressed, are arranged under the following headings: (1) General, in which certain practices—e.g., "covering"—are declared to be inadmissible; (2) consultations, dealing with the mutual relations of consultant and general practitioner; (3) attendance on behalf of another practitioner; (4) interference; and (5) miscellaneous. Amongst these are provisions against the taking of commissions from any kind of person, the exhibition of scales of fees, &c.

The Medical Institute.

This society has recently held its annual meeting, the president, Mr. E. Rickards, occupying the chair. It was pointed out as a remarkable fact that the number of members had remained almost the same for the past 15 years and it was suggested that some sort of canvass should be made to increase the number upon the rolls. This at present amounts to 203—i.e., 36 life and 167 ordinary members. The library contains 13,327 volumes and the reading-room is supplied with a large number of periodicals, British and foreign. It has always been a source of surprise and disappointment to those interested in the scientific advance of the profession that so valuable an institution as this is should receive so very moderate an amount of support. It cannot be denied that members receive a more than adequate return for the very moderate subscription demanded from them.

April 28th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Liverpool Port Sanitary Authority: Precautions with regard to Rats.

THE annual report of the medical officer of health to the Port Sanitary Authority of Liverpool states that the routine inspection of ships arriving from infected ports had been most thoroughly and carefully carried out by Dr. W. Hanna and Dr. N. E. Roberts. Plague having made no reappearance in Glasgow or Liverpool this year, attention was directed mainly to vessels arriving from foreign ports, although careful inquiries were always made and precautions taken in regard to rats on board ships coming from Glasgow, as also on board those arriving from the East. The prevalence of cholera in the East, especially in Egypt, added considerably to the duties of inspection. Not only was a personal examination of the crews made, but also inquiries were made as to the general state of health during the voyage. The water-supply and water-tanks were carefully inspected. The number of ships from infected ports medically inspected by Dr. Hanna and Dr. Roberts during the year was 105. Of this number four had, during the voyage, cases of plague or suspected plague on board which were landed in hospital before arrival. Two had cases of cholera during the voyage, while three ships brought cases of a doubtful nature. These were cases with suspicious buboes. On careful examination in hospital these were found to be of a non-infectious nature. No yellow fever cases were imported during the year, although during the latter part of the year the disease became prevalent at Para, Manaos, and other South American ports. It had for some time been customary in Liverpool, as elsewhere, to supply metal discs to be adjusted on the ropes and hawsers, to prevent rats from leaving the vessel when in dock, and careful observations had been carried out with the view to ascertain definitely the real value of these rat guards. Experience led to the conclusion that they could not be relied upon entirely in preventing rats leaving a ship. Sticky tar had been also tried upon the ropes with no better success. Poison is a ready means of killing the vermin in large numbers, but they frequently carry off the bait into their holes and die there, causing a nuisance. Trapping had yielded the best results. This could only be carried out effectually by an experienced and reliable rat-catcher. Fumigation of ships with holds empty although effective was impracticable as a regular routine method in a large shipping port. Since the middle of June last the services of a professional rat-catcher had been utilised in catching rats aboard ships arriving from infected ports. Rats when caught were sent alive to the corporation bacteriologist who examined and reported as to the presence of plague infection amongst them. Rats killed on board were destroyed in the ship's fires. 121 cases of infectious disease (other than plague) were brought into the port during the year 1902. 3046 vessels were inspected and 1754 were found to be defective in their sanitary arrangements. Most defects were due to want of cleanliness. 214,113 emigrants left the port during the year 1902.

Small-pox in Liverpool and in the County of Lancaster: an Unwelcome Increase.

Dr. E. W. Hope, the medical officer of health, reported to the health committee of the city council that 66 fresh cases of small-pox were notified during the week ending April 16th and 94 cases during the week ending April 23rd. There had been seven deaths during the past week, whilst the number of cases remaining under treatment in the corporation hospitals was 305. Mr. Edward Sergeant, the medical officer of health for the administrative county of Lancaster, has issued a circular giving valuable information with regard to small-pox. He mentions that during the quarter ended March 31st 447 cases and 29 deaths occurred in the administrative county of Lancaster. He gives some interesting particulars of the protection afforded by efficient vaccination and revaccination. He states that although isolation of small-pox cases in hospitals is essential as an auxiliary to vaccination it is no substitute for it, as in an unvaccinated population it would be utterly impracticable to provide sufficient small-pox hospitals, and therefore the only way to defy small-pox is by having recourse to vaccination and revaccination.

Bequest to the Royal Infirmary.

The late Miss Ann L. Formby of Formby, Lancashire, has bequeathed £1000 to the Royal Infirmary in memory of her late father, Dr. Richard Formby, who was honorary physician to the Royal Infirmary from 1832 to 1842.

Proposed New Hospital at Garston.

A deputation of residents at Garston waited upon the finance committee of the city council to solicit aid in providing a new hospital at Garston. For the past 20 years

cases of accident occurring in the works, at the docks, and on the railway at Garston have been treated in the Garston accident hospital, which is a converted shop and has only five beds. Its sanitary arrangements are not by any means perfect and its appointments are not up to date. Its accommodation is now entirely inadequate. A single serious accident at one of the works has furnished more cases than could be accommodated. It is impossible to remove cases of serious accident to the nearest hospital in the city—the Royal Southern, which is five miles distant—without increased suffering and lessening the chance of recovery. The population of Garston has increased from 10,000 to 20,000 during the past 20 years and with the projected new dock in anticipation a further increase is to be expected. An adequate and properly-equipped hospital is therefore considered a necessity. In the first instance 15 beds would be required with the means of increasing that number when the occasion shall arise. The cost of the building and equipment is estimated at £10,000 exclusive of site. The amount of land desirable would be about two acres. The cost of maintenance would be about £50 per annum per bed occupied with a minimum annual expenditure of £500. The preliminary committee asked the Liverpool corporation to grant a site and to make a substantial contribution towards the cost of erecting and equipping the hospital. It confidently expects that sufficient voluntary contributions for its support will be forthcoming, which is very doubtful. The chairman of the finance committee said the city council might, perhaps, be disposed to give a site for the hospital and a handsome contribution, but it had no power to support the hospital out of the rates.

April 28th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Isolation Hospital for Pontardawe.

ONLY a few years ago the isolation hospital accommodation in the county of Glamorgan was of a very meagre character, but the sanitary authorities appear now to have realised the necessity for providing such institutions and in several districts in the county hospitals are either in course of erection or are in contemplation. On April 23rd a substantially built and well-equipped hospital was opened at Alltwen for the rural district of Pontardawe which is situated to the north of Swansea. The population of Pontardawe at the last census was 21,000, an increase of nearly 4000 persons since the previous census. The new hospital buildings are on a site two acres in extent and include two ward pavilions with accommodation for 12 patients, an administrative block, and a laundry block. The cost of the institution is £6700.

Gloucestershire Police and First Aid.

The Gloucestershire county council has voted £20 for the purposes of the St. John Ambulance Association's instruction to the county police. Out of the entire force of 375 men there are only 26 who have not yet obtained the certificate of the association.

Cardiff Football Club and Charities.

The grounds of the Cardiff football club, which are situated in the centre of the town, are the property of the Marquis of Bute who was recently presented by the club with £500 to be used by him for some charitable purpose. His lordship at once forwarded the £500, together with an equal amount on his own account, to the Cardiff Infirmary.

Proposed Banquet to Sir John Williams.

At the University College, Cardiff, on April 20th a meeting was held under the presidency of the Mayor to form a committee to make arrangements for a banquet of welcome to Sir John Williams, Bart., M.D., F.R.C.P., on the occasion of his leaving London to reside in Wales. It was decided to ask Lord Windsor, lord lieutenant of the county and a vice-president of the University College, to preside.

Sanitary Inspectors' Association of South Wales and Monmouthshire.

This association has been in existence since 1897 and includes among its members nearly all the sanitary inspectors in Monmouthshire and the six southern counties of Wales. The members of the association meet three or four times yearly in different districts and the gatherings are, as a rule, productive of much good. On April 25th the association met at Penllergaer, near Swansea, when there was a discussion upon Sir Francis Powell's Public Health Bill relating to the tenure of office and superannuation of sanitary officers. Dr. William Williams (medical officer of health of the county of Glamorgan) stated that he did not consider that fixity of tenure would be advisable in all circumstances, while Mr. Ebenezer Davies (medical officer of health of Swansea) and Mr. D. J. Thomas (medical officer of health of Merthyr Tydvil) were of opinion that the present precarious position of sanitary officers interfered considerably with the proper carrying out of sanitary reforms, more especially in rural districts. Sir John Llewelyn, who is a member of the Glamorgan county council and who at one time represented Swansea in the House of Commons, spoke in favour of the provisions of the Bill and said that he considered that the Government should be approached with a view to facilities being given for the consideration of the measure. A paper which was read by Mr. D. R. Thomas, the district sanitary inspector, upon the Swansea rural district as it was, as it is, and as it should be, was in a sense a commentary upon the discussion on the Public Health Bill, for Mr. Thomas has been appointed permanently and is not subject to re-election year by year. He was able to speak of the early days of the council when the members entertained only crude and antiquated ideas with regard to sanitation and when their one desire was to save the ratepayers' pockets. At the present time the councillors hold more enlightened views and dwelling houses are not only inspected, but insanitary surroundings when found are remedied, and there appears also to be a general inclination to carry out sanitary measures.

Newport Port Sanitary Authority.

From the recently issued annual report of Dr. J. Howard-Jones, the medical officer of health of the Newport (Mon.) port sanitary authority, it appears that 6356 vessels with an aggregate tonnage amounting to 2,297,268 entered the port during 1902. This number is about one-half that which entered the port of Cardiff during the same year. Three vessels arrived at Newport during the year with small-pox on board, three with typhoid fever, and on one vessel there were ten men suffering from beri-beri. Of the 3355 vessels inspected during the year 17·5 per cent. were found to have sanitary defects. Dr. Howard-Jones gives a very interesting and instructive table setting out the percentages of vessels found to be insanitary arranged according to nationality. The table covers a period of six years. During 1902 the lowest percentage (13) was found in the Norwegian vessels and the highest in those from Italy (34). Of British ships 16 per cent. of those examined were insanitary.

April 27th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The University of Glasgow.

THE graduation ceremony at the close of the winter session of the University of Glasgow took place on April 21st. The Bute Hall, in which the proceedings were held, was filled in every part. Principal Story, who presided, was accompanied to the rostrum by Lord Provost Primrose and most of the members of the senate. Among those who received honorary degrees were two in whom the medical profession have a special interest. These were Sir William T. Gairdner, K.C.B., late professor of medicine in the University of Glasgow, and Dr. Thomas Oliver, an old graduate of the University and now professor of physiology in the University of Durham. It was a matter of profound regret to all that the former, on account of his state of health, was unable to be present. The degree, therefore, was conferred *in absentiâ*. Principal Story, who was listened to with marked attention, referred in his closing address to one or two points with regard to which the university authorities are much interested at present, among these being the effect that the prospective Education Bill for Scotland will have on the universities. He expressed the hope that it would contain no new provisions for a meddlesome bureaucratic control, leaving nothing to the free initiative of zealous teachers and repressing into a dull monotony with its codes and regulations the ardour of eager scholars; he also hoped that it would institute school boards of larger area of distribution and entrust the

educational interests of the country to persons chosen expressly for those duties and that it would not mix them up incongruously with the business of a county council whose concerns were entirely distinct from those of education. He then adverted, not altogether sympathetically, to the influence of the Carnegie benefactions on the Scotch student and expressed the view that much more benefit would accrue to education than could ever be accomplished by the payment of fees if some part at least of the money spent under section B of the trust could be diverted to the purpose of increasing teaching facilities, especially of enlarging the staff of teachers by appointing more than one lecturer in the same subject, as is commonly done in the German universities. Principal Story has always the courage to express his views and there is no doubt that his remarks will tend to guide matters in the right direction.

The Summer Session, Glasgow.

All the medical schools, the University, Anderson's College, and St. Mungo's College, opened their summer session on April 22nd, but it is only during the present week that the work of the session has properly begun.

The Death-rate in One-Apartment Houses in Glasgow.

At the twelfth ordinary meeting for the session of the Royal Philosophical Society, held on April 23rd, Dr. A. K. Chalmers, medical officer of health of the city of Glasgow, delivered his presidential address to the Sanitary and Social Economy Section, his subject being the Death-rate in One-Apartment Houses. This must prove a valuable contribution and will shed some light on certain questions under investigation by the Housing Commission at present at work in this city. Dr. Chalmers in his paper points out that if the last census be taken as a guide it will be found that 136,511 of the population live in houses of four or more apartments, 151,731 in three apartment houses, 348,731 in two-apartment houses, and 104,128 in one-apartment houses. Now the death-rate of the last class, taking one year, is as high as 32·7 per 1000, and this is equal to the death-rate of the worst sanitary districts of the city, and yet the class, forming a seventh of the whole population, is widely distributed throughout the town. This death-rate is 11 per 1000 more than the death-rate for those living in two-apartment houses and 21 per 1000 more than that for still larger houses. Another fact of great importance brought out is that while during recent years there has been a marked diminution of the death-rate amounting to about 20 per cent. in all other houses, that in the one-apartment houses has remained persistently high. Again, this high death-rate is associated with the high infant mortality largely caused by zymotic disease and diarrhœa—diseases well known to persist and to spread under such insanitary conditions. Dr. Chalmers deserves a word of praise for so opportunely presenting the above facts for the consideration of all interested in the housing problem and public health generally. He certainly has indicated in what direction work must be done to obtain a still further reduction of the death-rate, especially that connected with infant mortality, which remains so persistently high in all large towns.

April 28th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal University of Ireland.

AT the present time the medical examinations in connexion with the Royal University are proceeding in Dublin, the number of candidates being large.

Fees for the Sanitary Inspection of Cottages.

At the Midleton quarter sessions, before Sir J. C. Neligan, recorder of Cork, Dr. James O'Connell sued the Midleton board of guardians for remuneration for professional services rendered in inspecting 39 labourers' cottages. It was stated in the course of the trial that Dr. O'Connell had been directed by the guardians to inspect the cottages, which were old, for the purposes of ascertaining whether they were fit for occupation. The guardians had passed a resolution that they would pay all the dispensary medical officers of the union a sum of 3*s.* for inspecting each cottage. Dr. O'Connell wrote to the Local Government Board which informed him that he was bound to act on the resolution of the guardians without any stipulation, but that it (the Local Government Board) usually allowed 5*s.* per cottage. Dr. O'Connell in his evidence stated that he had to travel by car on an average two and a half miles to each of 34 cottages and six miles to each of the other five cottages. He claimed 5*s.* for visiting each of the 34 cottages and 7*s.* 6*d.* for each of the remaining five. He also claimed £2 2*s.* for giving evidence at a Local Government Board inquiry at Midleton and 6*s.* car-fare to and from Midleton on the occasion of his giving evidence at the inquiry. The guardians lodged a sum in court, but the recorder in giving judgment held that the guardians had not acted reasonably in the circumstances and gave a decree for the full amount claimed by Dr. O'Connell. In a separate action Dr. O'Connell sued the guardians for 18*s.* car-hire incurred in bringing in the dispensary medical books for inspection by the guardians as ordered by the Local Government Board. In this case the recorder gave a decree for 15*s.* with costs.

The Ulster (Benn) Eye, Ear, and Throat Hospital.

At the thirty-second annual meeting of the supporters of this hospital, which was held on April 23rd, it was reported that during the past year a total of 1995 cases had been treated in the hospital—viz., 1367 eye cases, 400 ear cases, and 228 throat cases. A large part of the operations were for cataract. Financially, the balance due to the Ulster Bank at the beginning of the year was £412 16*s.* 8*d.*, and at the end of the year £291 11*s.* 10*d.* The total income for the year was £834 0*s.* 6*d.* and the expenditure was £725 10*s.* 8*d.* Dr. Allen has been appointed an additional assistant surgeon and Dr. Isaac A. Davidson an anæsthetist.

Death of Thomas P. O'Meara, B.A., M.B. T.C.D., L.R.C.S. Irel.

The death of Dr. Thomas P. O'Meara of Carlow took place on April 25th and was unexpected, while it caused widespread regret. During his long official connexion with the Carlow district lunatic asylum as resident medical superintendent considerable additions were effected in the institution and many improvements were made at his suggestion. He was a well-known townsman of Carlow and is sincerely regretted by his many friends there and in the surrounding county.

April 28th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Inhalation of Amyl Nitrite in Hysteria.

M. Hirtz and M. Louste at the meeting of the Hospitals Medical Society held on April 3rd communicated the results of some observations which they had made upon two patients who showed various hysterical manifestations which disappeared almost at once upon the inhalation of nitrite of amyl. The first case that of a woman, aged 26 years, who for a period of three weeks had exhibited one-sided contractures and anæsthesia, together with aphasia. The second case was that of a man, aged 55 years, who showed one-sided paresis and anæsthesia and who stammered. The results obtained with these two cases go to support the idea of M. Hirtz as to the various symptoms which are generally considered together under the name of "angiospasm," a disease which in certain cases starting as peripheral angiospasm is the forerunner of arterio-sclerosis. Angiospasm may also take a visceral form or if it be in the cerebro-spinal system can bring about all the varying manifestations of hysteria and of hystero-neurasthenia. It sometimes ends, owing to its localisation in the renal vessels, in an intermittent albuminuria, orthostatic[1] or otherwise, or else in a chronic albuminuria. In the stomach it may give rise to ulcerations together with hæmatemesis such as are often observed in hysterical patients. On this theory it is quite easy to understand th favourable action of amyl nitrite.

April 24th.

[1] Albuminuria which occurs only when the patient is not confined to bed.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

National Bureau of Medicines and Foods.

ARTICLES of incorporation of a body to be known as the "National Bureau of Medicines and Foods" have been prepared to be submitted to the next meeting of the American Medical Association. The particular object for which this corporation is to be created is to determine on and to fix standards of identity, purity, quality, and strength and to secure adherence to prescribed formulas of all drugs, chemicals, and foodstuffs, and of all articles intended for use in the arts and sciences or for human consumption; to diffuse accurate and reliable information as to such articles, preparations, or products, and as to those making or dealing in the same; to procure uniformity and certainty in the customs, usages, and methods of manufacture of those engaged in the foregoing or allied trades; to supervise the manufacture, preparation, or production, and distribution by its members of all commodities, articles, or preparations mentioned, and on sufficient evidence that the standards of identity, purity, quality, and strength, as well as adherence to prescribed formulas have been maintained, and that all requirements for manufacture, preparation, or production, as set forth in the by-laws, rules, or regulations made and provided have been complied with by the member manufacturing, preparing, producing or distributing such commodities, articles, or preparations, to issue to such member a certificate of identity, purity, quality, or strength, and compliance with prescribed formulas, which certificate shall be of the form and nature and shall be used in the manner set forth in the by-laws, regulations, or rules for that purpose made and provided; provided, however, that no medicinal preparation shall be so certified unless the formula, couched in the ordinary terms of chemistry and pharmacy and giving the qualities of the active ingredients, shall have been or shall be published; to settle differences between its members and to promote a more friendly intercourse between business men and between its members; to aid, to stimulate, and to encourage research, investigation, and study that will enlarge, improve or increase, and diffuse knowledge and information of materia medica, chemistry, pharmacy, pharmacology, pharmacognosis, pharmacodynamics, therapeutics, and all arts and sciences allied thereto.

Decreased Birth-rate.

Congress passed a resolution recommending that State and municipal authorities should coöperate with the Census Bureau in securing uniform and complete registration of births and deaths. The total population of the United States in 1890 was 62,947,714 and the natural increase during the next ten years was 12,315,361. The average annual rate of excess of births for those ten years was 17·7 per 1000 of population. The death-rate was 16·3 per 1000 in 1900 and about 8 per cent. per 1000 in 1890, as given in the census reports of that year. Taking the mean of these as representing the average annual death-rate for the decade there must have been an average birth-rate of 35·1 per 1000 to produce the increase of population. The average annual rates of increase of population, calculated by the excess of births over deaths, are as follows: mothers of native birth and parentage, 19·5 per 1000; foreign parentage, 36·5; and coloured, 17·8. In New England the native rate is 3·8 and the foreign 39·6. The lowest birth-rate is among the native families of New England; in Connecticut it is the lowest of any State; while in Utah there is the highest percentage. There is an interesting table in the census reports showing that among the foreign population of the United States the fecundity of the different races of mothers during the ten years from 1890 to 1900 was in the following order: Bohemian, Russian, Hungarian, Italian, Scotch, Scandinavian, Canadian, English, German, French, and Irish. The officials of the census office believe that the true birth-rate of the country was probably much higher than 35·1 per 1000. As near as they can calculate it should be about 10 per cent. higher.

The Study of Tropical Medicine and Surgery.

The Jefferson Medical College, Philadelphia, has established a lectureship on tropical medicine and surgery for the senior class. No examinations were held on it nor was attendance on it essential to graduation. The lectures were given by Captain Kieffer of the army. Instead of a dozen about 150 men (nearly the entire senior class) attended and showed the greatest possible interest in the subject. The junior class also requested the privilege of attending. The Washington Post-Graduate Medical School opened a similar course subsequently. Professor W. W. Keen of the Jefferson Medical College strongly advocates courses of instruction on tropical diseases and states that not only is the profession in the subtropical portions of the United States interested in the subject most vitally but the new possessions in Hawaii, the Philippines, and Porto Rico, the very intimate relations with Cuba, and the very early establishment of the Panama Canal with a large population of Americans in Central America make it imperative that the American Medical Association should give considerable attention to this subject.

Amending Statutes relating to Patents.

Statutes relating to patents have been amended so as to relieve medical and dental practitioners from unjust burdens imposed by patentees holding patents covering methods and devices for treating human diseases, ailments, and disabilities. The original reads as follows: "Any person who has invented or discovered any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvement thereof not known or used by others in this country before his invention or discovery thereof and not patented or described in any printed publication in this or any other country before his invention or discovery thereof, or more than two years prior to his application and not in use or on sale in this country for more than two years prior to his application, unless the same is proved to have been abandoned, may on payment of the fees required by law and other due proceedings had obtain a patent therefore." The following is added: "But no patent shall be granted on any part of treating human disease, or ailment, or disability, or on any device adapted to be used in the treatment of human disease or disability or attached to the human body and used as a substitute for any lost part thereof or any art of making such device unless such device is adapted to be put on the market and sold."

Recent Legislative Proposals.

An amendment to the sanitary law has been introduced into the Assembly of New York State. It prescribes the duties of a medical inspector to be appointed by the Commission in Lunacy for the purpose of visiting and inspecting the several State hospitals and other institutions for the insane which are subject to the supervision of the Commission. Two Bills relative to pharmaceutical questions have also been introduced into the same Assembly. One of them is intended to regulate the manufacture and sale of drugs in New York State and to prevent their adulteration or their sale when deteriorated by natural causes; it also provides a heavy penalty for the intentional substitution of one medicine for another by a dispenser. The second of these Bills is directed against the practice of distributing "any free or trial samples of any medicine, drug, chemical, or chemical compound by leaving the same exposed upon the ground, sidewalk, porch, doorway, letter-boxes, or in any other manner that children may become possessed of the same."

April 17th.

Medical News.

UNIVERSITY OF CAMBRIDGE.—The following candidates have been approved for the Diploma in Public Health:—

A. Armer, E. C. Bousfield, J. F. D'Abreu, A. B. Dalgetty, J. Donald, A. M. Fleming, F. Grone, G. W. Jenney, H. M. Mackenzie, S. G. Mostyn, E. W. Reese-Jones, G. E. Richmond, H. B. Roderick, J. Sandison, D. Sommerville, A. C. Stevenson, G. C. Taylor, F. P. Vieyra, and A. E. Walker.

UNIVERSITY OF BIRMINGHAM.—At the examinations for the degree of Bachelor of Medicine and Bachelor of Surgery held in April the following candidates satisfied the examiners:—

First Examination.—Edward James Boome, Eric Thomas Gaunt, John Kennedy Gaunt, Philip James Mason, Nevill Coghill Penrose, David Priestley Smith, and Norman Valentine Williams.

Second Examination.—John Staines Austin, Henry Neville Crowe Leonard Leigh Hadley, Lionel Chattock Hayes, Harold Bruce Jones, and Henry Philip Thomason.

N.B.—The foregoing list, published for the convenience of candidates, is provisional only and is not final until the report of the examiners shall have been confirmed by the Senate.

UNIVERSITY OF DURHAM.—At the third examination for the degree of Bachelor in Medicine held in April the following candidates satisfied the examiners:—

Second-class Honours.—Evan Llewellyn Jenkins, M.R.C.S., L.R.C.P., St. Mary's Hospital. *Pass List:* Dudley Thomas Birt, Arthur Budd, and William Henry Hugh Croudace, College of Medicine, Newcastle-upon-Tyne; Arthur Edward Clayton, L.R.C.P. and S., Edinburgh School of Medicine; Harold Edgar Featherstone and John Galloway, College of Medicine, Newcastle-upon-Tyne; William Watkiss Jones, Birmingham University; Lillie Johnson, B.Sc., College of Medicine, Newcastle-upon-Tyne; Philip William James, M.R.C.S., L.R.C.P., and Frederick William Kemp, St. Bartholomew's Hospital; Cyril Claude Lavington, Colin Francis Frederick McDowall, and Ernest Martin, College of Medicine, Newcastle-upon-Tyne; Christie Muthuswamy-Anthony, Guy's Hospital; Ernest James Miller, L.S.A., King's College, London; Sidney Nix, St. Mary's Hospital; Herbert Lovis Noel-Cox, St. Thomas's Hospital; and Andrew Banks Raffle, Robert Blackett Reed, William Edward Stevenson, and William Lister Tindle, College of Medicine, Newcastle-upon-Tyne.

UNIVERSITY OF EDINBURGH.—The following is the official list of passes at the recent professional examination for degrees in Medicine and Surgery:—

First Professional Examination.—G. P. Adshead, Margaret I. Balfour, J. P. Berry, Gilbert Britto, R. A. Campbell, J. M. Christie, R. D. Clayton, W. G. Cobb, W. D. Coghill, W. Cramer (Ph.D.), T. H. Dickson, J. C. Drysdale, P. A. Euvrard, C. J. Faill, John Fraser, Thomas Fraser, R. M. Glover, G. R. Gray, K. K. Grieve, James Grimoldby, D. J. Guthrie, D. K. Henderson, George Henderson, J. R. Hill, J. M. Hill, G. A. Hodges, S. W. Hogg, W. P. Holden, Lloyd Hughes, H. B. Hunter (M.A.), Blanche M. Z. Johnston, Daniel Johnstone (M.A.), N. W. Kidston, G. F. V. Leary, J. H. Lechler, Edward Lewis, Anna S. Lindsay, C. W. L. Luthgen, G. D. M'Iver, J. L. Mackay, A. T. Mackenzie, R. E. M'Laren (with distinction), Murdo Maclean, J. A. MacLeod, R. J. A. Macmillan, J. E. M'Morland, Jamesina J. Marr, L. R. H. P. Marshall, L. E. Marwick, R. P. Mathers, A. H. M. Maxwell, C. J. van der Merwe, Margaret M. Miller, Ada G. Murchison, J. E. Murray, E. F. Nivin (M.A.), Hilda M. Northcroft, A. J. P. Nowell, C. R. O'Brien, A. T. Paterson, Graham Robertson, J. M. Ross, F. L. Scott, H. C. Simpson, W. J. Simpson, A. G. H. Smart, L. D. Stephen, William Stevenson, P. Stewart, L. H. F. Thatcher, C. A. Thelander (with distinction), C. P. Theron, Alice M. Thompson, Laurence R. Thomson, A. L. Thornley, W. A. Todd, Lydia K. Towers, R. D. R. Troup, A. S. Walker, F. E. Wall, R. N. Wallace, D. J. Williamson (with distinction), J. L. Masterman Wood, and A. F. Wright.

Second Professional Examination.—Thomas Addis, Mukhtar Ahmed, Francis Aitken, J. C. D. Allan, A. G. Anderson, D. J. Anderson, W. F. Archibald, G. G. Bartholomew, M. M. Sujjad Beg, Norman Black, D. P. Blair, George Blair, James Brennan, Herbert Brown, W. S. Murdoch Brown, H. C. Buckley, J. S. Caldwell, R. B. Calwell, John Chisholm, H. P. Cook, D. C. Crole, J. A. Cruickshank, D. R. J. Davidson, Thomas Davidson, F. H. Dickson, J. M. Dickson, Pollok Donald, E. A. Elder, M.A., B.Sc., C. E. Elliston, Hugh Ferguson, J. J. H. Ferguson, F. E. Field, R. S. Frew (with distinction), W. S. Fröhlich, F. H. Somers Gardner, L. P. M. Gardner, J. H. Gellatly, William Gemmill, O. M. Gericke, E. G. Girdwood, R. V. Goldstein, D. G. Gray, O. C. Greenidge, John C. Grieve, George Hadden, J. R. Hall, J. D. Harmer, A. J. Harpur, A. A. Hatchard, A. S. Hendrie, W. M. Hewetson, H. S. A. Hogg, J. R. Holgate, J. G. Hume, Joseph Ings, T. Scoresby Jackson, J. F. James, J. P. S. Jamieson, Solomon Kark, J. R. Kerr, Ethel Landon, R. H. S. Langevekit, J. M. Lauder, Jas. Lindsay, John Lindsay, W. L. Locke, William Lumsden, S. A. M'Clintock, Peter M'Dermid, Peter M'Ewan, T. A. MacGibbon, J. D. M'Kelvie, James Mackenzie, K. W. Mackenzie, Steward M'Naughton, Charles M'Neil, N. N. G. C. M'Vean, W. J. Maloney (with distinction), Alfred Malseed, S. E. Martin, E. S. Massiah, Alexander Mathieson, D. M. Mathieson, J. B. Mears, A. I. Miller, O. M. Mirylees, J. S. Mitchell, C. T. Möller, D. L. Morrison, H. L. Morrow, A. M. Mulholland, R. R. Murray, G. P. Norman, A. J. R. O'Brien, A. A. Ollivierre, William Patten, A. E. Porter, H. E. Rawlence, A. E. Carey Rees, B.A., D. G. Reid, W. E. Reynolds, W. G. Robertson, J. Z. H. Rousseau, B.A., Alexander Sandison, W. M. Scott (with distinction), W. J. B. Selkirk, A. C. Sharp, J. O. Shireore, D. W. Sibbald, E. M. Simmers, E. S. Simpson, Oliver Smith, R. C. Standring Smith, T. R. Smith, A. der G. V. van Someren, A. B. Spence, S. H. S. Taylor, J. A. R. Thomson, N. B. Turnbull, Edward Valenzia, Philip Vickerman, F. M. Wakefield, R. C. Walker, A. P. Wall, H. E. A. Washbourn (with distinction), H. C. Weber, Andrew Wight, E. B. Wilkie, H. C. Wilson, James Young, and James Theodore Young.

Old Regulations.—M. I. Balfour and John Clark.

Third Professional Examination.—R. G. W. Adams, E. A. Aylward, J. W. H. Babington, Francis Baillie, R. B. Barnetson, William Basson, Benjamin Baty, W. P. Beattie, Douglas Bell, L. H. I. Bell, A. R. Berrie, J. M. Beyers, A. S. L. Biggart, D. W. Boswell, F. T. Bowerbank, David Brown, Robert Buchanan, R. B. Calwell, T. E. Carlyle, M. M. L. Cathels, J. W. Cathles, D. M. C. Church, G. S. Clark, H. S. Coghill, A. G. Cook, A. G. Coullie (with distinction), T. E. Coulson, A. B. Cox, J. G. Craig, George Cunningham, Robert Donaldson, G. T. Drummond, T. H. Easton, C. G. Edmonston, E. J. Elliot, N. C. Fischer, G. H. L. Fitzwilliams, W. H. Forsyth, Louis Fourie (with distinction), A. N. Fraser, W. J. Fraser, N. J. H. Gavin, A. C. Geddes, H. M. Gillespie, J. M. Graham, O. C. Greenidge, W. W. Greer, John Grieve, E. J. Griffiths, P. A. Harry, Ephraim Henderson (M.A.), Isabel Hill, T. J. H. Hofmeyr, A. W. Hogg, G. S. Husband, K. U. A. Inniss, Ada Jackson, Annie Jackson, John Jardine, John Kirk, G. F. S. Landon, A. J. Lewis, S. M. Livesey, James Lochhead (with distinction), J. B. Lockerbie, D. H. C. MacArthur, A. D. M'Callum (with distinction), William M'Conaghy, J. P. M'Gowan (with distinction), H. R. Macintyre, R. J. Mackessack, E. M. Macmillan, Alexander MacRae, D. P. Marais, G. D. Mathewson, H. P. Milligan, Aimée E. Mills, L. S. Milne, T. B. Mouat, W. M. Munby (with distinction), A. E. Nalborough, Archibald Oliver, C. D. O'Neal, R. G. S. Orbell, Garfield Ormrod, Armand Pampellonne, W. J. Patterson, Bernard Pickering, F. M. S. Price, D. S. Rama Chandra Rao (M.A.), H. S. Reid, M. H. Robertson, S. M. Ross, C. S. Ryles, John Saffley, J. G. B. Shand, J. I. Shepherd, W. H. Simpson, F. R. Sinton, G. M'C. Smith, W. A. Wilson Smith, Patrick Steele, F. H. Stewart, Hugh A. Stewart, Herbert J. Stewart, A. C. Strain (with distinction), K. A. Moody-Stuart, S. H. S. Taylor, Annie F. Theobalds, G. H. Ussher, F. L. de Verteuil, R. W. L. Wallace, R. H. Watt, W. C. P. White, W. F. J. Whitley, D. P. D. Wilkie, F. A. Wille, W. B. Wishart, A. C. T. Woodward, Thomas Wright, and Margaret C. W. Young.

FOREIGN UNIVERSITY INTELLIGENCE.—*Naples:* Dr. Atilio Curcio has been recognised as *privat-docent* of Orthopædic Surgery.—*Prague (Bohemian University):* Dr. Eduard Babak has been recognised as *privat-docent* of Physiology.—*St. Petersburg (Military Medical Academy):* Dr. Fédoroff of Moscow has been appointed Extraordinary Professor of Surgery.—*Toulouse:* Dr. Bézy has been appointed Professor of Children's Diseases and Dr. Marie has been appointed Professor of Physics.—*Vienna:* Dr. Isodor Neumann, Professor of Dermatology, is about to retire, having reached his seventieth year. Dr. Karl Sternberg has been recognised as *privat-docent* of Pathological Anatomy, and Dr. Josef Halban as *privat-docent* of Midwifery and Gynæcology.

A COLLECTION OF DRUGS.—With reference to our note last week on Mr. E. Merck's collection of drugs he informs us that specimens of ergot, camphor and colchicum are present in the collection "which is designedly and professedly intended to include crude vegetable products only." We regret not to have seen these specimens, but we cannot help thinking that the limitations of the collection impair its practical value. Mr. Merck writes: "No representation is suggested or implied as to the collection giving all that is necessary to the medical student in the way of specimens for recognition." We were informed that the collection was intended to meet the requirements of medical schools and our criticism was based upon that idea.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN.—The eighty-seventh annual court of the governors and friends of the Royal Hospital for Children and Women was held at the Mansion House on April 25th when the Lord Mayor, who was accompanied by the Lady Mayoress, took the chair. The report stated that the old hospital had been pulled down and that a new hospital of 200 beds would be erected on the old site and on the site of adjoining houses in Waterloo-road and Stamford-street. The main portion of the new hospital, comprising the whole of the enlarged site fronting on Waterloo-road and containing an out-patient department and accommodation for 100 beds, would be erected forthwith. The contract price of the portion now to be built was £30,000, exclusive of extras. In moving the adoption of the report, the Lord Mayor said that the hospital owed its origin to the Mansion House and therefore had a special claim on the sympathy and support of the citizens. Dr. T. D. Lister made some remarks with reference to the desirability of establishing a milk depôt for infants in connexion with the out-patient department of the new hospital. An annotation on an address by Dr. Lister on infant-feeding and milk-supply will be found at p. 1257 of our present issue.

THE HOSPITAL SATURDAY FUND.—The Lord Mayor accompanied by the Lady Mayoress presided over the annual meeting of the Hospital Saturday Fund which was held at the Mansion House on April 25th. The report for 1902 showed a distinct improvement over that for 1901. The income for last year was £22,964—an increase of £1417 over the figures for 1901. The total sum distributed during 1902, including the grants to the distribution, surgical appliance, and ambulance committees, was £20,662, as against £19,244 in 1901. Notwithstanding the large increase in the general work of the fund the percentage of expenses of management showed a decrease. Sir Savile Crossley, M.P., chairman of the Fund, referring to the abolition of the street collection, said that the Fund had not suffered any loss from that step. Sir E. H. Currie, in supporting a motion proposed by Alderman Sir W. Treloar to the effect that increased efforts should be made to interest the working classes in the work of the medical charities, said that he did not desire to see the hospitals of London supported by the rates, but the time was approaching when that would take place unless those responsible for their management made up their minds to keep down the expenses. The motion was adopted. The Lord

Mayor, in replying to a vote of thanks, said that everybody would agree that it would be a deplorable thing if the hospitals had to go on the rates. There was a middle course, however—they might be exempted from paying rates.

THE LATE MR. CHARLES HIGHETT.—In memory of the late Mr. Charles Highett, M.R.C.P. Edin., a former mayor of Bristol, a scholarship of £25 has been placed at the disposal of the governors of the Bristol Grammar School.

PRESENTATION TO A MEDICAL PRACTITIONER.—On April 15th a silver tea service and salver were presented to Mr. C. J. Cressy, M.R.C.S. Eng., L.R.C.P. Lond., of Wroughton, Wilts, on his retirement from practice. The service was subscribed for by the inhabitants of Wroughton and the neighbourhood.

HEALTH EXHIBITION AND DEMONSTRATION.—A series of demonstrations on the preservation of health in the tropics will be given at the Examination Hall, Victoria Embankment, W.C., on May 6th in connexion with Livingstone College. Dr. L. W. Sambon will deliver a lecture at 3 P.M. on the Chief Disease Scourges of the Tropics in their Relation to the Development of Greater Britain.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Jean Baptiste Vincent Laborde, director of the Paris Physiological Laboratory, at the age of 72 years. His best known papers are, perhaps, those dealing with icterus and with aconitin and colchicin. He was much interested in public medicine and was an active member of the Society for the Suppression of Drunkenness.—Dr. L. Armanni, professor of pathological histology in Naples.—Dr. F. Randacio, an Italian anatomist.—Dr. Bottini, professor of clinical surgery in Pavia.—Dr. C. von Kahlden, extraordinary professor of pathology in Freiburg.—Dr. Manuel Barros Borgoño, professor of clinical surgery in the University of Santiago, Chili.

ANKYLOSTOMIASIS IN CORNWALL.—Dr. J. S. Haldane, F.R.S., who, in association with Mr. Martin, inspector of mines, has been making inquiries into the health of Cornish miners on behalf of the Home Office, gave an interesting lecture to the students of the Camborne (Cornwall) School of Mines, on April 18th, on some of the results of his inquiries. Dr. Haldane stated that the illness which affected the miners at Dolcoath and other mines in the Camborne district of Cornwall was ankylostomiasis, which was locally known as "Dolcoath anæmia." He said that as the disease was spread only by pollution of the ground with human fæces the miners should be clearly informed of this fact and precautions taken. At Dolcoath mine a system of metal pails for use underground had been introduced, tins of disinfectants were provided, and the pails were sent up to the surface regularly. He added that the elaborate system of medical examination adopted in German collieries was not necessary; the disease even if introduced could never give much trouble in mines which were in a proper sanitary condition.

GLOUCESTER ISOLATION HOSPITAL.—The formal opening of the Gloucester Infectious Diseases Hospital at Over, on the outskirts of the city, was performed on April 24th by the chairman of the sanitary committee, accompanied by a large number of members and officials of the council. The hospital, which is built of red brick and tile, is designed to accommodate 40 patients and is arranged in four main blocks. The administrative block stands at the south-east corner of the site and forms the residence of the matron, servants, and about a dozen nurses. It is designed with a view that, should necessity arise, the hospital accommodation can easily be increased without any need of adding to this part of the establishment. Two main hospital blocks, each with 16 beds, an observation ward with eight beds, and a discharging block complete the system. The site, which is on the brow of a hill, was originally 38 acres in extent, but a slice has been disposed of and there now remain 27 acres, 2 roods, 24 poles. The prospect is very pleasant and the situation has been generally pronounced to be an ideal one for such an institution. The total cost of the site and buildings is about £25,000. After the opening ceremony the chairman of the sanitary committee (Councillor Dennis Reardon) was presented with a chiming clock by members of the corporation as a token of appreciation of his services. Cases of small-pox will not be treated at this hospital, the site being too small for the purpose according to the regulations of the Local Government Board, but a site for the erection of a small-pox hospital has been recently secured by the corporation and sanctioned by the Local Government Board in another quarter near the city.

ROYAL INSTITUTION.—The Friday evening discourse at the Royal Institution on April 24th was delivered by the Hon. R. J. Strutt, the subject being Investigations in Electrical Conduction. He said that the action of the gold leaf electroscope depended on the approximate non-conductivity of air for small differences of potential, but conductivity could be imparted to air and electrical "leakage" produced in various ways, as, for instance, by the influence of Roentgen rays and radium emanations. Differences in the gases that were present and also in the linings of the vessels employed caused great differences in the amounts of leakage produced either by Roentgen rays or by Becquerel rays.

THEIR Royal Highnesses the Prince and Princess of Wales, as Grand President and Lady Grand President of the League of Mercy, are inviting the presidents, lady presidents, vice-presidents, and other workers for the league to a garden party at 4 P.M. on Friday, May 22nd, at Marlborough House. The presidents and lady presidents of the league will be received by the Prince and Princess of Wales in the afternoon. The league has been instrumental in contributing £22,000 to King Edward's Hospital Fund and a "Samaritan" branch of its work is in process of organisation. The offices of the league are at 29, Southampton-street, Strand, W.C., and the organising secretary, Mr. Reginald G. Lund, will give all information to inquirers.

CHORLTON UNION (MANCHESTER) HOSPITAL EXTENSION.—The foundation-stones of two new hospital pavilions and an annexe to the nurses' home at the Withington workhouse were laid on April 14th. The pavilions will have 32 beds on each of three floors. The surgical ward will have 13 beds. The total number will be 205 beds which, added to the present accommodation, will give about 1600 beds. The nurses' home will accommodate 49 nurses and ten servants, or 55 nurses if the servants are housed elsewhere. It is expected to cost £7400 and the two pavilions £25,300. The chairman of the board of guardians, Mr. Ramsden, said that nowadays the term "workhouse" was a misnomer; the institution was really a hospital for physical and mental diseases and a refuge for the aged poor. Among the 2000 and odd inmates of their own workhouse there were not more than 50 women and 40 men who were really able-bodied. Beside the 700 sick and 300 insane there were 600 old people under the medical officer's care. He accounted for the increased number in their hospitals by the conditions of life having "changed enormously." If the servants, shop girls, laundry workers, and so on, who now flocked into the towns, "were taken ill they chiefly had to seek refuge in the hospitals if they were to get proper attention, for the union hospitals were really State hospitals, and he should not be very wide of the mark when he said that where they had hundreds of cases in their voluntary hospitals they had thousands of cases in their union hospitals." He said, moreover, that there were more sick in union hospitals in London alone than there were in all the voluntary hospitals in England and Wales together. How far this may be true it is difficult to say, but if true it will be received with mixed feelings. It is deplorable that vast numbers live on the verge of poverty so acute that an illness sends them for succour among the paupers and yet it is well that such help can be obtained. At the laying of the foundation-stone of the nurses' home Dr. Rhodes dealt with Poor-law hospital work, contrasting the state of things in 1854 with that existing now. London then employed only 70 paid—not trained—nurses; now there were 1649. In addition to these 70 there were 500 "pauper nurses" to look after 5000 sick. Half of them were over 50 years of age, a quarter of them were over 60 years, and many were over 70 years. Some of them "were paid something for their services; in one case 1*d*. a week and extra beer, in another 3*d*. per week, but this was soon withdrawn on economic grounds." In a report it was said: "They all drink; whenever they go out for a few hours they come back drunk and have to be put to bed in the sick wards." Happily, to-day is an improvement in some

things on the yesterday of 1854, and undoubtedly, among the many remarkable changes or developments that have taken place since Dickens wrote "Oliver Twist," the altered position of nursing and nurses in public estimation, notwithstanding a few occasional sentimental extravagancies, is not the least remarkable or the least beneficial.

POISONING BY ACETYLENE.—It is reported that in Paris on April 21st a man and a boy were found lying dead in a shed where they had been repairing a motor car. They had been using an acetylene lamp the generator of which was not in proper connexion with the burner.

DONATIONS AND BEQUESTS.—Under the will of Mr. Thomas Glascott Venables the Victoria Park Hospital and the Samaritan Fund of the London Hospital receive £100 each.—Mrs. Elizabeth Hannah Crate by her will bequeathed £1000 to the Brompton Cancer Hospital to endow a bed in memory of the late Joseph Crate, and £1000 to the Brompton Hospital for Consumption to endow a "Charlotte Hue" bed in memory of her mother.—Mr. Thomas Shelmerdine by his will bequeathed £100 to the Salford Royal Hospital and a like sum to St. Mary's Hospital, Manchester.—By the will of the late Mr. Samuel Palmer of Northcourt, Hampstead, formerly treasurer of the charity, a legacy of £500, free of duty, has been left to the St. John's Wood and Portland Town Dispensary.

FRENCH HOSPITAL AND DISPENSARY.—At the Hotel Cecil on April 25th M. Paul Cambon, the French ambassador, presided over the thirty-fifth annual dinner in aid of the funds of the French Hospital and Dispensary. The chairman, in giving the toast of "The King and Queen and the Royal Family," referred in felicitous terms to the decision of His Majesty to terminate his long tour by stopping at Paris. In submitting the toast of "The Founders and Benefactors of the Hospital" M. Cambon said that they had had on many occasions to express their gratitude for the assistance rendered by the City of London which was the heart of England. Appeals to that city had never been in vain. During the course of the evening a list of subscriptions was read by M. Ernest Rüffer amounting in all to upwards of £3100, and to this total the chairman contributed £20 and the Lord Mayor £25.

THE BATTLE OF THE CLUBS AT FLEETWOOD.—The medical men in Fleetwood, Lancashire, the well-known seaport town and watering place eight miles from Blackpool, recently united and demanded an increased fee from the various medical clubs in the district—viz., 4*s.* per member per annum and 1*s* examination fee for candidates instead of 2*s.* 6*d.* per member per annum only. The clubs refused to pay more than 3*s.* 3*d.* per member per annum, which the medical men agreed to accept for one year only in order to allow the clubs time to rearrange their finances, provided that a written guarantee was given that at the end of the year 4*s.* would be paid. The clubs rejected this proposal and engaged a medical man from another town at a salary of £180 per annum, but upon matters being explained to him before taking up his duties by the medical men of Fleetwood he promised to resign, so that the clubs—which are the "Mechanics," "Oddfellows," "Rechabites," "Orangemen," and "United Catholic," with a combined membership of between 1200 and 1300—should now be without medical officers unless they have since succeeded in making other arrangements. It will be interesting to watch further developments of tactics in this little battle. When the medical men serving such clubs form a union amongst themselves and ask for reasonable remuneration the first move of the clubs is naturally to seek to import substitutes from other towns who are willing to accept lower fees. We wish to impress upon our readers that it is discreditable to accept such employment and to assist in the ousting of their professional colleagues from their work because a demand for fair payment has been formulated.

Parliamentary Intelligence.

HOUSE OF COMMONS.

WEDNESDAY, APRIL 22ND.

Medical Referees.

MR. S. ORMSBY-GORE asked the Home Secretary if he could state in how many cases medical referees under the Workmen's Compensation Act had been called in to assist the county-court judges during the last year for which returns were available.—MR. COCHRANE, who replied, said: The number of cases in England during 1902 in which a reference was made to the medical referee was 86. 39 of the references were by county-court judges and the remainder by arbitrators and arbitration committees. The number of references in 1901 was 83. The number of references in Scotland during 1902 was 61; in Ireland two.

THURSDAY, APRIL 23RD.

The Budget Statement.

MR. RITCHIE, in submitting his Budget, in which he proposed to take 4*d.* off the income tax and to remit the corn tax, made some references to the food and drink of the people. He mentioned that while the greatest amount of revenue was obtained from customs the chief deficiencies which took place were in sugar and tea. The deficiency in the sugar revenue was due to more than one cause. It was due to the very large stocks which were in hand at the beginning of the year in consequence of the rush to clear for fear of the rising duty, and also to the fact that the beet crop of 1902-03 was nearly 1,000,000 tons less than that of 1901-02 which was a record year. It was perhaps also due in some degree to the suspense of operations connected with the Brussels Convention and to the United States Treaty with Cuba, and likewise to the fact that bounty-fed sugar could be stored more cheaply in the countries of production than here. The deficiency in tea was in the main attributable to the anticipation of a reduction of duty. As to excise neither beer nor spirits were quite up to the mark. Beer stood still and spirits advanced as compared with the previous year but not so much as he had hoped. Of course there were compensations. Deficiency in the first must be due to a cold summer which did not promote thirst, and in the second to the warm winter which did not promote the consumption of spirits, so that owing to cold in the one case and heat in the other they had not derived quite the revenue which they anticipated. As for a reduction of taxation sugar had undoubtedly a claim, and if it could not be called an actual necessary of life it was very nearly one. To reduce the duty by one half would cost £3,000,000 and he had not £3,000,000 to spare. His choice was thus limited to tea and corn. Tea had many attractions. It was the easiest and least contentious but it could not be said to be dear, nor did he think that the duty of 6*d.* was very excessive. It was not strictly a necessary of life. Mr. Gladstone spoke of tea and sugar as being harmless and beneficial articles. He (Mr. Ritchie) was not sure that some people did not take too much of them, but one thing certain was that they were not raw material. Corn was in a greater degree a necessary of life than any other article of food. It was a raw material; it was the food of the people; it was the food of our horses and cattle. In his opinion, being a prime necessary of life it had the first claim to be associated with the large remission of income tax which he proposed. Therefore he proposed to remit the corn duty.

MONDAY, APRIL 27TH.

County Councils and Medical Officers.

DR. FARQUHARSON asked the President of the Local Government Board whether he would state what county councils in England and Wales have appointed medical officers and whether he would specify those cases in which such medical officer gives his whole time to the duties of the office.—MR. LONG replied. 26 county councils have appointed medical officers of health. In 11 of these cases the officer gives his whole time to the duties of his office. I shall be happy to furnish the honourable Member with a list.

Vaccination Registers.

MR. GUTHRIE asked the President of the Local Government Board whether his attention had been called to a report made by a committee of the Poplar guardians with respect to the entries made in the vaccination registers for the Lady Day, 1902, quarter; and whether he would direct an investigation into the matter or what action he proposed to take on the report.—MR. LONG replied: My attention has been called to the report referred to. The number of cases included in the registers for the quarter ended at Lady Day, 1902, amounted to upwards of 10,000 and I could not undertake to cause an investigation to be made into all these cases. One of the medical inspectors of my department will, however, shortly visit the union for the purpose of making the ordinary inspection of the work of vaccination. He would in the usual course inquire generally into the action of the public vaccinators in making the entries in their registers and I have directed that in the present case he shall make a special report to me on the subject.

TUESDAY, APRIL 28TH.

Japan and Medical Diplomas.

MR. WEIR asked the Under Secretary of State for Foreign Affairs whether he was aware that Mr. Samuel T. Knaggs, M.D., F.R.C.S.I., applied in December last to practise his profession at Kobé, Japan, but was informed by the British consul at Kobé that the licence could not be granted until investigation regarding the diplomas had been made in this country; and whether, seeing that Dr. Knaggs was accredited to the British consul at Kobé by the Premier and Chief Secretary of the State of New South Wales as having held Government appointments in that State, he would ascertain why the British consul did not take steps to satisfy the Japanese authorities as to Dr. Knaggs's *bona fides* without awaiting the result of inquiries in this country.—LORD CRANBORNE: I have no information on this subject, but His Majesty's Consul at Kobé will be requested to report the facts

WEDNESDAY, APRIL 29TH.

Bovine Tuberculosis.

MR. FIELD asked the President of the Local Government Board whether he could state the total cost to date of the commissions to inquire into bovine tuberculosis; when the commission at present sitting was likely to issue its report; and whether the Government would consider the advisability of adopting the principle of compensation for confiscation in connexion with tuberculosis seizures.—MR. LONG: I am not in a position to give information asked for on the first point referred to in the question—viz., the cost of the commissions. The matter is one for the Treasury. As to the second point, I have already replied to the questions by the hon. Member this session as to when the commissions are likely to report and I am not able to add anything to those answers. I cannot give any promise as to the matter referred to in the last part of the question, especially whilst the report of the royal commission is pending.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ALDERSON, REGINALD, M.D., B.S. Durh., has been appointed Honorary Assistant Surgeon to the Hospital for Sick Children, Newcastle-upon-Tyne, vice Mr. Wilfred E. Alderson, resigned.

BARBER, ALEXANDER, J.P., L.R.C.S. Irel., M.D. Brux., has been appointed a Member of the Licensing Court for the Licensing District of Penrith, New South Wales, Australia.

BOND, F. T., M.B. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Cirencester Rural District Council.

BROCKWAY, ARCHIBALD BIRT, M.R.C.S., has been appointed a Member of the Dental Board of Queensland, Australia.

CONLON, WILLIAM ALOYSIUS, M.B. Syd., has been appointed Public Vaccinator for the District of Reefton, New Zealand.

GREEN, T. A., M.D., C.M. Edin., has been appointed Clinical Assistant to the Chelsea Hospital for Women, Fulham-road, London, S.W.

HOPKINS, GEORGE HERBERT, F.R.C.S. Eng., has been appointed a Member of the Dental Board of Queensland, Australia.

KELLY, R. VANDELEUR, C.B., F.R.C.S.E., L.R.C.P.E., has been appointed Resident Surgeon and Dispenser at the Trial Bay Prison, New South Wales, Australia.

MACKENZIE, JOHN A., M.A., M.B., Ch.B. Aberd., has been appointed Resident Physician at Aberdeen Royal Infirmary.

MCCLELAND, HUGH AUGUSTUS, M.R.C.S., L.R.C.P. Lond., has been appointed a Port Health Officer for the Port of New Plymouth, New Zealand.

MCCLELLAND, ARTHUR WELLESLEY, M.B., C.M. Glasg., has been appointed Public Vaccinator for the Knowle District by the Bristol Board of Guardians.

PHILLIPS, CHARLES MORLEY, M.D. Brux., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 10 district and Medical Officer for the Home for Girls, Brislington.

SCOTT, EDWARD HENRY, M.B., Ch.M., Syd., has been appointed Public Vaccinator for the District of Reefton, New Zealand.

SLATER, HOWARD, M.R.C.S., L.R.C.P. Lond., has been appointed Public Vaccinator for the District of Waihi, New Zealand.

SMITH, FREDERICK K., M.A., M.B., Ch.B. Aberd., has been appointed Resident Surgeon at Aberdeen Royal Infirmary.

STENHOUSE, ANDREW, M.B., B.S. Univ. N.Z., has been appointed Public Vaccinator for the Districts of Catlin's, Balclutha, and Popotuna, New Zealand.

SYMES, W. LANGFORD, M.D. Durh., F.R.C.P.I., has been appointed Pathologist to the Royal City of Dublin Hospital.

THURSTAN, E. PAGET, M.D., B.A. Cantab., M.R.C.S. Eng., L.S.A. Lond., has been appointed Physician to the Perth Public Hospital.

TILLEY, HERBERT, M.D. Lond., F.R.C.S. Eng., has been appointed Examiner in Laryngology to the Royal Army Medical College.

WADE, NOEL NATHANIEL, M.B., Ch.B. Edin., has been appointed Assistant House Surgeon to the Cardiff Infirmary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ABERDEEN ROYAL INFIRMARY.—Medical Superintendent. Salary £300 per annum, without residence.

BARRA, PARISH OF.—Medical Officer and Public Vaccinator. Salary £119.

BIRMINGHAM WORKHOUSE INFIRMARY.—Assistant Resident Medical Officer. Salary £100 per annum, with apartments, rations, coal, gas, laundry, and attendance.

CANCER HOSPITAL, Fulham, S.W.—House Surgeon for six months, renewable. Salary £70 per annum, with board and residence.

CARNARVONSHIRE AND ANGLESEY INFIRMARY, Bangor.—House Surgeon. Salary £80 per annum, with board, washing, and lodging.

CHESHIRE COUNTY ASYLUM, Parkside, Macclesfield.—Junior Assistant Medical Officer, unmarried. Salary £140, rising to £160 per annum, with board, apartments, washing, and attendance.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Pathologist. Salary 100 guineas per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, S.E.—Anæsthetist. Honorarium £25 per annum.

GROCERS' COMPANY.—Three Medical Scholarships, each of the value of £250, for Researches into the Causes and Prevention of Important Diseases.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, W.—House Surgeon. Salary at the rate of £50 per annum, with board and residence.

HULME DISPENSARY, Dale-street, Stretford-road, Manchester.—House Surgeon. Salary £150 per annum, with apartments, attendance, coal, and gas.

JENNER INSTITUTE OF PREVENTIVE MEDICINE.—Director. Salary £1000 per annum.

LEICESTER INFIRMARY.—Clinical Clerk. Honorarium £10 10s., with board, apartments, and washing.

LIVERPOOL DISPENSARIES.—Assistant Surgeon, unmarried. Salary £100 per annum, with board and apartments.

LIVERPOOL OPEN AIR SANATORIUM.—Locum tenens for fortnight from May 13th. Terms £4 4s. weekly.

MANCHESTER ROYAL INFIRMARY.—Resident Medical Officer, unmarried. Salary £150 per annum, with board and residence.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—Dental Surgeon.

MIDDLESEX HOSPITAL, W.—Director of Cancer Research Laboratories. Salary £500, rising to £800 per annum. Also Research Scholarship, value £105 per annum.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Assistant House Surgeon. Salary £50 per annum, with board, residence, and washing.

NORFOLK AND NORWICH HOSPITAL.—Second Assistant House Surgeon, for six months. Honorarium £20, with board, lodging, and washing.

NORTHAMPTON GENERAL INFIRMARY.—House Surgeon, unmarried. Salary £125 per annum, with apartments, board, attendance, and washing.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Bethnal-Green, E.—House Physician, House Surgeon, and Resident Casualty Officer for six months. Salary in each case at rate of £80 per annum, with board, residence, and washing.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon, unmarried. Salary £160 per annum, increasing, with apartments, attendance, light, and fuel.

ROYAL HALIFAX INFIRMARY.—Third House Surgeon, unmarried. Salary £80 per annum, with residence, board, and washing.

ST. MARY'S HOSPITAL, Quay-street, Manchester.—Medical Officer for six months. Salary £65 per annum, with board and residence.

SHEFFIELD ROYAL HOSPITAL.—Junior Assistant House Surgeon, unmarried. Salary £50 per annum, with board, washing, and apartments.

SOCIETY OF APOTHECARIES OF LONDON.—Examiner in Medicine.

SOUTHPORT INFIRMARY.—Resident Junior House and Visiting Surgeon, unmarried, for six months, renewable. Salary at rate of £70 per annum, with residence, board, and washing.

STATE OF SARAWAK, MEDICAL DEPARTMENT.—Medical Officer, unmarried. Salary $300 a month and quarters.

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S.W.—House Surgeon for six months. Honorarium of £25, with board and lodging.

WESTMINSTER HOSPITAL, S.W.—Medical Officer in charge of Electrical Department. Also Assistant Ophthalmic Surgeon.

WEST RIDING ASYLUM, Wadsley, near Sheffield.—Fifth Assistant Medical Officer. Salary £140, rising to £160, with board, &c.

WEST RIDING ASYLUM, Wakefield.—Assistant Medical Officer. Salary £140, rising to £160, with apartments, board, washing, and attendance.

WIVELISCOMBE DISPENSARY AND INFIRMARY.—Resident Surgeon. Salary £50 a year with house.

YORK COUNTY HOSPITAL.—House Physician. Salary £100 per annum, with board, residence, and washing.

Births, Marriages, and Deaths.

BIRTHS.

ANDREW.—On April 26th, at Hendon, N.W., the wife of F. W. Andrew, M.R.C.S., L.R.C.P. Lond., of a son.

CHARSLEY.—On April 27th, at Shenstone, Malvern, the wife of Gilbert W. Charsley, M.B. Birm., of a son.

HILL.—On April 26th, at Cressener House, St. Neots, Hunts, the wife of Ernest Gardiner Hill, L.R.C.P. Lond., D.P.H., of a daughter.

HOCKEN.—On March 9th, at West Wallsend, Newcastle, N.S.W., the wife of J. Preston Hocken, M.D., M.R.C.S., L.R.C.P., L.S.A., of a son.

SAUNDERS.—On April 26th, at Hampton Court, the wife of Allan Lindsey Saunders, M.R.C.S., L.R.C.P. Lond., of a son.

SLADEN.—On April 1st, at Igatpuri, India, the wife of R. J. Lambart Sladen, M.R.C.S. Eng., L.R.C.P. Lond., of a daughter.

WALKER.—On April 24th, at 168, Ladbroke-grove, W., the wife of Lewis A. Walker, M.D. Lond., of a son.

MARRIAGES.

ATKINSON—RICHARDSON.—On April 28th, at Christ Church, Lancaster-gate, London, by the Rev. E. G. E. Richardson, vicar of Baglan, Glamorganshire, brother of the bride, assisted by the Rev. H. P. Brewer, vicar of Sturry, Kent, brother-in-law of the bridegroom, Charles Mason Atkinson, M.R.C.S. Eng., L.R.C.P. Lond., of Ashford, Kent, to Emmeline Gertrude, youngest daughter of the late Rev. Canon Richardson, of Northop, Flintshire.

HACKNEY—BLASSON.—On April 25th, at St. James's Church, West Hampstead, Gordon Herbert Hackney, M.R.C.S., L.R.C.P. Lond., to Dorothy, youngest daughter of the late George John Blasson, M.R.C.S., L.S.A.

HERBERT—WILLIAMS.—On Tuesday, April 21st, at St. Martin's Church, Dorking, by the Rev. G. H. Torrance, assisted by the Rev. E. A. Chichester, vicar of the parish, William Arthur Herbert, M.R.C.S. Eng., of Billingshurst, Sussex, to Gertrude Louisa, only daughter of Rev. G. A. Williams, of Rose Hill, Dorking.

MILROY—TABERNER.—On the 21st April, at Pemberton parish church, by the Rev. G. F. Wills, M.A., vicar of Upholland, William Cunningham Milroy, M.D., Liscard, Cheshire, to Ethel, eldest daughter of Captain Taberner, Orrell Hall, Wigan. (At Home, 88, Seabank-road, Liscard, 20th and 21st May.)

WEBSTER—HIRSCH.—On April 28th, at Christ Church, Chester, by Rev. Mr. Baxter, Harold George Webster, M.R.C.S., L.R.C.P., of Longford, Coventry, son of E. Watmough Webster of Chester and West Kirby, to Mabel, daughter of the late Hermann Hirsch of Victoria Park, Manchester.

WESTRUP—WILSON.—On April 22nd, at St. Matthew's, Bayswater, Joseph Percival Westrup, M.R.C.S., L.R.C.P. Lond., to Edith Clara, youngest daughter of the late Edward Wilson and of Mrs. Hudson, Talbot House, Southport.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

SENSATIONS IN DROWNING.

A GRAPHIC account of a terrible experience has been given in the January number of the *Edinburgh Medical Journal* by Dr. James A. Lowson, late of the Hong-Kong Civil Service. On Oct. 9th, 1892, the Peninsular and Oriental Company's mail steamer *Bokhara* encountered a typhoon while on the way from Shanghai to Colombo, ran on a reef in the Straits of Formosa shortly before midnight on the 10th, and went to the bottom in less than a minute. Dr. Lowson says that notwithstanding the lapse of years the details are indelibly impressed on his memory; he attributes the perfect clearness of all that happened and the almost preternatural calm with which the crisis was faced to the fact that the vessel had for some hours been expected to founder in deep water; when instead of doing this the vessel struck a reef there appeared a faint gleam of hope. He continues as follows:—

"The terrific crash at once woke one up to the extreme gravity of the situation, and with scarcely time to think I pulled down the life belts, and, throwing two to my companions, tied the third on myself and bolted for the saloon companion—i.e., staircase—intending to reach the bridge or rigging. There was no time to spare for studying humanity at this juncture, but I can never forget the apparent want of initiative in all I passed. All the passengers seemed paralysed—even my own companions, some of them able military men, had no idea of doing anything. The stewards of the ship, uttering cries of despair and last farewells, blocked up the saloon entrance to the deck, and it was only by sheer force I was able to squeeze past them; and just in time, too, as the first heavy sea at once poured down the companion. I saved myself from being washed down with it by standing in a corner of the deck-house, the down-rushing water reaching to the middle of the body. My costume consisted at this time of a suit of pyjamas, a singlet, and the life-belt. Getting out on deck I at once made for the bridge and was climbing up the steps when a perfect mountain of water seemed to come from overhead, as well as from below, and dashed me against the bridge companion, steps and legs seeming to be inextricably mixed up. The same sea washed my head up against the bridge, causing, as I afterwards found, a deep incised scalp wound about four or five inches long and knocking me insensible. The next thing I remember was trying to struggle through the rails of the upper bridge, which was now at the level of the water. The ship was evidently going down rapidly and I was pulled down with her, still struggling to extricate myself. I got clear under water, and immediately struck out to reach the surface as I thought, but evidently only to go further down. This exertion was a serious waste of breath and after what appeared to be ten or 15 seconds, the effort of inspiration could no longer be restrained and pressure on the chest began to develop. Probably the most striking thing to remember at this period of time was the great pain produced in the chest, and which increased at every effort of expiration and inspiration; it seemed as if one were in a vice, which was gradually being screwed up tight until it felt as if the sternum and spinal column must break. Many years ago my old teacher, Sir Henry Littlejohn, used to describe how painless and easy a death by drowning was—'like falling about in beautiful green fields in early summer'; this flashed across my brain at the time and I said to myself, 'Poor old devil, Littlejohn—scarcely so accurate that time.' The 'gulping' process became more frequent for about ten efforts and hope was then extinguished. Even although I had seen no land I felt sure there must be some near and had hoped to get to the surface again to make an effort to reach it. The pressure after these ten (*circa*) rapid 'gulps' seemed unbearable, but gradually the pain seemed to ease up as the carbonic acid was accumulating in the blood. At the same time the efforts at inspiration with their accompanying 'gulps' of water occurred at longer and longer intervals. My mental condition was now such that I appeared to be in a pleasant dream, although I had enough will power to think of friends at home and still retain vivid recollections of the clearness of the sight of the Grampians, familiar to me in boyhood, which was brought to my view. Before finally losing consciousness the chest pain had completely disappeared and sensation was actually pleasant. What time I had then passed in the water I cannot possibly say—but I should think about two minutes; I was greatly handicapped below water by the previous exertion in getting on deck, and then by the stunning blow on the head, with the result that instead of going down after a full inspiration there was actually very little more than residual air in the lungs. Then the useless attempt to reach the surface would further reduce the time necessary to produce unconsciousness. What happened when inspiration was attempted was that the mouth was immediately filled with water and, the epiglottis closing or closed down on the larynx, the act of swallowing at once occurred. I think the only time the epiglottis was not close down was during the short expirations which took place after every attempt at inspiration.

The article on drowning in the 'Encyclopædia Britannica' says: 'The drowned individual struggles to reach the surface of the water in his efforts to respire—as he does so he draws water into his windpipe which provokes cough.' I cannot see how it is possible for a man *under* water to cough and I do not believe that any water will get into the trachea until after unconsciousness comes on. I have made post mortem examination of scores of drowned bodies in Hong-Kong and 'froth in the trachea' is anything but a constant sign. Where efforts at artificial respiration have been made one would expect this frothy condition, or if in drowning they had come to the surface once or twice. Captain Marryat's experience of drowning was that the sensations were rather pleasant than otherwise, and Sir Henry Littlejohn seems to have almost used Captain Marryat's words. They are both wrong—Marryat probably forgot about some of his sensations.

To go on with the narrative: consciousness returned and I found myself at the surface of the water and managed to get about a dozen good inspirations. A hurried glance showed me the land apparently about 400 yards distant, and I proceeded to utilise first a bale of silk and then a long wooden plank to assist me to the shore. These and the life-belt were of the greatest use also in saving my body from being bashed about on the reef in the tempestuous sea. As it was, feet, knees, and the regions of the anterior superior iliac spines were considerably lacerated. On landing and getting behind a sheltering rock no effort was required to produce copious emesis. ..... Our after-adventures were not very interesting from a medical point of view. All wounds got badly inflamed, as is usual from the action of the salt water, but I was able to relieve the pain of the gash in the scalp by getting it under a constant 'drip' of rain. After the excitement sound sleep set in, although lying on sharp and rough stones in a ruined hut—the only shelter on a barren and uninhabited island. This sleep had lasted for about three hours when a profuse diarrhœa came on, evidently brought on by the sea-water ingested. Until morning broke all my muscles were in a constant tremor, which could not be controlled by any means."

A PUNNY MAN.

A CORRESPONDENT sends us the following specimen of how he would answer some of our correspondents for us if we would let him:—

Smith (*not Sir Thomas*).—Have a little more Pye-Smith and try the Power of Murphy with Pepper and get on to the Broadbent of Barlow's Tomes till they fit you like a Glover. Turner way from any Lowe Ball, go to Church and have a Godlee Reid, and afterwards get on a Brown Gee and be a bit Horsley, and have a Cruise now and again, when you will come up Smyly; but what Fitzgerald may not fit you. If you Lister me you will become a Truman and will have a Fairbank account after Payne what you're Owen the Serjeant Surgeon who, when he re-Treves it, will gasp "How did you d'Hewitt?" to which you must reply, "How did you de-Sieveking Edward so long?" What can I say Fayrer? Thomson, Wakley.

*** In view of the last two words the Editors wish to disclaim any responsibility for this production save that implied by its insertion.—ED. L.

A HOME WANTED.

T. McC. writes: "Can any of your readers tell me where I could send an epileptic girl to be taken care of? She can contribute somewhat towards her keep."

THE HOT BATHS AT TIBERIAS.

IN the May issue of the *Sunday at Home* there is an interesting article on the Hot Baths at Tiberias which the natives ascribe to *Suleiman el Hakeem*, but, as the writer, Mr. M. A. H. Allen, points out, all Orientals in Palestine credit King Solomon with much building that modern criticism would hardly allow to be his work. Be this as it may, there is an authentic account of the baths being used as far back as the time of Josephus. The hot springs which supply the baths are about a mile south of the present city and the water from the principal spring is conducted by pipes to the baths which were built by Mohammed Ali. The largest and handsomest of these is a picturesque domed building without windows, but sufficiently lighted by large knobs of green glass built into the domes. The accommodation provided is not such as to attract Europeans but the natives go to the baths in crowds. Europeans do occasionally, however, occupy the baths and Mr. Allen was fortunate enough to secure two rooms which he describes as follows: "the upper one to live in and the lower one containing my bath—a large tank sunk in the floor. There was a small porch to this room which served for our kitchen. Not a single window in the living room could boast of its panes of glass being all whole. The beams of the roof just over the head of my bed had to be shored up to prevent them coming down with a crash, and there was a large hole in the wall which we had to stop up with stones and straw." The purpose of this hole it seems was originally intended to facilitate the removal of the sweepings from the floor. To add to the pleasures of this primitive dwelling the writer's servant had very rudimentary ideas with regard to waiting at table. Plates were usually dusted with the palm of his hand while his breeches served beside their legitimate purpose as a knife-polishing cloth. Salt

was handed in the hollow of his bare hand. The article concludes with a short account of the fauna of the district. After an experience of this kind we should not have been surprised if the writer had stated that the benefit which he enjoyed from his six weeks' stay at the baths in search of health had been of a doubtful nature, but he seems to have enjoyed his adventures and at any rate has survived to write an entertaining narrative.

NORTHAMPTONSHIRE NURSING ASSOCIATION.

AN influential and numerously attended meeting was held at the Northampton Town Hall on April 16th in connexion with the formation of the Northamptonshire Nursing Association. Mr. E. P. Monckton presided in the absence of Earl Spencer, Lord Lieutenant of the county. After completing the preliminary business the chairman announced that the details of the scheme would be explained to the meeting by Miss Hughes, superintendent of the county nursing association, St. Andrew's House, Mortimer-street, London, W., in connexion with the Jubilee Institute, Gloucester-gate, Regent's-park. Miss Hughes said that country nursing, in which the bulk of the work consisted of maternity cases and chronic cases, was not popular with skilled nurses, and the prime object of a county association, especially if affiliated to the Queen Victoria Jubilee Institute, was to encourage the nurses by causing them to feel that they formed part of a substantial organisation. The association would exercise strict supervision to prevent the nurses from interfering with the work of the medical men. The meeting then engaged in a discussion on the constitution and rules of the association, the following being a condensed selection from the various conclusions which were arrived at:—

The name of the association shall be the Northamptonshire District Nursing Association, to carry on its work in the county of Northampton, including the Soke of Peterborough. The association shall consist (1) of representatives from all affiliated local nursing associations in the county, (2) of annual subscribers of 10s. and upwards, and (3) of donors of £5 and upwards. The control and management of the business and funds of the association shall be vested in the general county committee, 30 of whose members shall be elected annually by the county association, and the remainder shall be representatives from the affiliated nursing associations.

The general committee shall take steps to secure that not less than six or more than ten qualified medical men in the county, and the medical officers of health of the county, and of the Soke of Peterborough, be appointed as medical advisers to the association.

Existing nursing associations shall in no way be interfered with unless they desire to affiliate with the Northamptonshire District Nursing Association, but every local nursing association immediately on affiliation shall come under the rules of the county association.

The work of the nurses shall be under the supervision of the county superintendent. Every endeavour will be made to employ fully trained nurses, but where that is found impossible "village nurses" who have received not less than 12 months' training and have obtained an approved midwifery certificate may be employed. The pay of the nurse shall not be less than 14s. a week, to include board and lodging and washing.

The nurse shall invariably act upon and carry out the directions of the medical attendant. She must send in a report of the work once a month to the county superintendent, and in any case of more than usual difficulty she must at once communicate by post under cover to the county superintendent.

With regard to the medical advisory committee, Mr. Sidney C. Lawrence, M.R.C.S. Eng., of Earls Barton, said that he hoped that the committee would not all be consultants but would include general practitioners who were acquainted with the circumstances of the humbler classes. He was glad to hear that the nurses would understand that they were not to work in opposition to the medical men but in harmony with them as handmaids. Difficulties were sure to arise unless it was clearly laid down that a nurse must not attend particular cases on her own judgment. The following officers were then elected: Lord Spencer, president; Miss Florence Saunders, secretary; and Mr. Herbert Percival, treasurer.

BROMIDE OF ETHYL.

To the Editors of THE LANCET.

SIRS,—My attention has been drawn in a casual way to bromide of ethyl as a general anæsthetic, being readily administered and harmless and suitable for such minor operations as opening abscesses, &c. Indeed, so far as I could ascertain, it acted very like "somnoform." Could your readers give me any information about its properties, especially with respect to its safety, or direct my attention to any experiments made with it? I am, Sirs, yours faithfully,

E. B.

A QUESTION OF ETIQUETTE.

ENQUIRER writes: "A and B were medical practitioners in the same town. B sold his practice in that town to A and removed to a near neighbouring town in which he then had patients and now resides and practises there. In accordance with the terms of his agreement B is disallowed ordinary practice in the town in which A lives and promises to support A's interest in that town. C, a third medical practitioner, commences practice in the town in which B now lives and has also patients in the town in which A lives. B and C arrange to join and be partners in their practice except that such practice as C does in the town in which A lives is the sole property of C and is carried on in his name only. Can A reasonably object to this arrangement?"

We feel that A can reasonably object to the arrangement. When C becomes B's partner B will have re-acquired a footing in the town where he previously lived and this is strictly contrary to the agreement under which he sold his practice in that town to A. B's support of A's interests in a town where his own partner C has also interests must necessarily be rather a half-hearted affair.

SELF-ADVERTISEMENT IN THE PROFESSION.

To the Editors of THE LANCET.

SIRS,—Let me point out to your correspondent, "Palmam qui Meruit Ferat," a neater and more excellent way of accomplishing the above than any mentioned by him in his letter in THE LANCET of April 18th, p. 1140. I have culled the enclosed from a parish magazine and it may be useful to others besides your correspondent.

I am, Sirs, yours faithfully,

April 22nd, 1903. F.

"It often contributes to the comfort of those who are more or less invalids, from time to time, when attending Church, to know that there is a medical man at hand. We are very pleased to welcome as members of our congregation Dr. and Mrs. —— and their family, now residing at ——."

*** The omissions are ours.—ED. L.

A QUESTION OF DIAGNOSIS.

THE April number of the *West London Medical Journal* is responsible for the following:—

Scene, West London Hospital. Porter engaged in an altercation with a female out-patient: "But which doctor do you want to see?"

Female Out-patient: "I don't know. I haven't seen anything for three months."

Porter: "What! Haven't seen anything for three months? Go to the eye department on the left."

AN UNOWNED TELEGRAM.

WE are asked to state that a telegram has been received at the Examination Hall, Victoria Embankment, W.C., from Calcutta, signed "Harris," and that the secretary of the Conjoint Board will be happy to give further information.

A CORRECTION.

IN THE LANCET of last week, in reply to a correspondent signing himself "Pes," we mentioned that Holt's Diseases of Infancy and Childhood was published by Kimpton. Messrs. D. Appleton and Co. inform us that until the end of last year this work was published by Kimpton but that it has now been transferred to them and is being issued from their London office, 25, Bedford-street, W.C.

D. X.—1. If an unqualified man engaged as a dispenser should undertake midwifery his principal would be guilty of covering and therefore liable to removal from the Register if the circumstances were brought before the General Medical Council. 2. A registered medical student cannot undertake midwifery cases. He can only assist his principal and work under his principal's immediate and direct supervision.

Nux Vomica.—The usual method is for the practitioner to send to his patients (and to them alone) a visiting card, the old address having a line drawn through it and the new address being added with the words, "Change of Address" engraved in the top left-hand corner.

H. M.—It is difficult to answer our correspondent's question without knowing the full details of the matter, but according to his letter we should say that he should bear two-thirds of the cost and the incoming partner one-third.

IN answer to various correspondents the address of the proprietors of the Arbenz Corn Extirpator is 33, Ludgate Hill, Birmingham.

C. B.—We do not know of any text-book written with the particular object.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 30th, 1903.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 a.m.
April 24	29·62	N.	0·20	85	50	37	39	42	Cloudy
,, 25	29·64	W.	0·58	104	62	35	40	44	Hazy
,, 26	29·49	S.W.	0·08	59	59	42	47	48	Raining
,, 27	29·28	S.W.	0·57	96	56	43	48	49	Raining
,, 28	29·56	W.	0·08	92	59	46	49	51	Cloudy
,, 29	29·30	S.	...	107	60	49	50	51	Raining
,, 30	29·42	S.W.	...	108	59	49	49	52	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.) Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (5th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.) London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.).

WEDNESDAY (6th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.) National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

THURSDAY (7th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (9th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (5th).—PATHOLOGICAL SOCIETY OF LONDON (St. Bartholomew's Hospital Medical School). Laboratory Meeting. Dr. F. W. Andrewes and Dr. K. J. P. Orton: Hypochlorous Acid as a Disinfectant.—Dr. Seligmann: On Cretinism.—Dr. Horder: A Note on the Relative Reactings given by the Hæmoglobinometers of Fleischl and Haldane.—Mr. Gask: Bacteriological Examination of a Case of so called Rheumatoid Arthritis.—Dr. Bainbridge: Some Suggestions concerning Renal Dropsy.—Dr. K. J. P. Orton and Dr. W. H. Hurtley: St. Bondzynski and K. Panek's Alloxy Proteic Acid—a Normal Constituent of Urine.

WEDNESDAY (6th).—OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Dr. Tate, Dr. Fairbairn, Dr. Williamson, Dr. J. Phillips, Dr. Galabin, Dr. Handfield-Jones, and Dr. Brook. Short Communication: Mr. S. Boyd (introduced by Dr. A. Routh): An Unusual Case of Inversio Uteri. Paper:—Dr. H. R. Andrews: The Anatomy of the Pregnant Tube.

THURSDAY (7th).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Fitchborne-street, Edgware-road, W.).—8.30 P.M. Papers:—Mr. T. C. English: Some Points in the Diagnosis of Acute Abdominal Cases.—Mr. P. L. Daniel: Gastro-Enteritis of Obscure Origin simulating Peritonitis.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-square, W.).—8 P.M. Clinical Evening. Mr. R. H. Elliot: Vafiadi's Instrument for Detaching Feigned Amblyopia.—Mr. G. Brooksbank-James: A New Portable Perimeter.—Mr. S. Hartridge: (1) Zonular Opacity of Cornea; (2) Central Choroiditis shown 14 years ago as a Possible Growth.—Mr. G. W. Roll: A Case of Microphthalmos.—Mr. J. H. Parsons and Mr. P. Flemming: Persistent Hyaloid Artery.—Mr. S. Stephenson: A Case of Papilloma of the Conjunctiva.—Mr. J. B. Story: Two Specimens of Detachment of the Vitreous.

RÖNTGEN SOCIETY (20, Hanover-square, W.).—8.30 P.M. Exhibition Evening. Exhibition of Various New Forms of Apparatus.—Cooper-Hewitt (Mercury Vapour) Lamp.

NORTH-EAST LONDON CLINICAL SOCIETY (Tottenham Hospital, N.).—4 P.M. Clinical Cases.

FRIDAY (8th).—OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos street, W.).—8 P.M. Additional Meeting. Mr. R. W. Doyne: A Case presenting several Deformities of the Eye, &c. Papers:—Dr. Payne and Dr. Poynton: A Contribution to the Study of Rheumatic Iritis.—Mr. W. H. H. Jessop: Two Cases of Tubercular Choroiditis.—Mr. E. Donaldson: (1) Alveolar Sarcoma of the Cornea; (2) Proptosis and Deformity of the Head.—Mr. A. F. Macallan: Report of Five Cases of Glaucoma in which Adrenalin caused an Increase of Tension.

CLINICAL SOCIETY OF LONDON (20, Hanover-square W.).—8.30 P.M. Papers:—Mr. C. A. Morton: A Case of Hairball in the Stomach.—Mr. F. S. Eve: Cases of Angioma of Synovial Membranes and of Muscle.—Mr. H. B. Robinson: A Case of Spinal Meningocele in which the Tumour made its Exit through a Defect in the front of the Spinal Column and Simulated an Intra-abdominal Cyst.—Mr. E. M. Corner: Cellulitis of the Round Ligament and Spermatic Cord and their Relation to Strangulated Hernia.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (4th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. J. F. Payne: Clinique. (Skin.)

TUESDAY (5th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. W. Ewart: Clinique. (Medical.) 5.15 P.M. Dr. T. K. Monro: Raynaud's Disease.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. Batten: Syringomyelia.

WEDNESDAY (6th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Cantlie: Clinique. (Surgical.) 5.15 P.M. Mr. T. Collins: Injuries and Diseases of the Orbit.

THURSDAY (7th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.) 5.15 P.M. Dr. G. D. Robinson: Uterine Displacements.

CHARING CROSS HOSPITAL.—4 P.M. Dr. Bruce: Medical Cases. (Post-Graduate Course.)

FRIDAY (8th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. D. Grant: Clinique. (Ear.) 5.15 P.M. Dr. A. P. Luff: The Differential Diagnosis and Treatment of Chronic Disease of the Joints.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

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